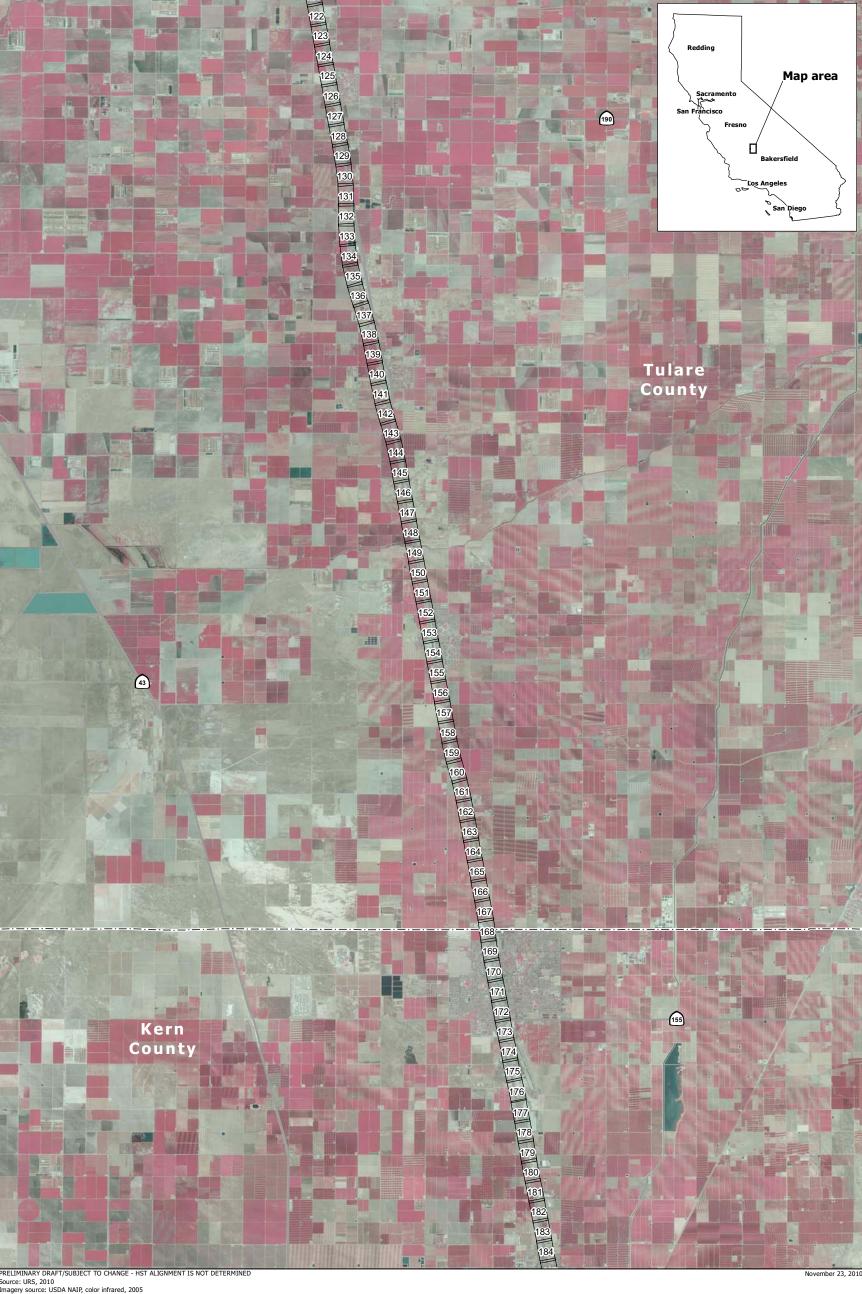


0 1 2 Miles Sheet extent

 $\begin{bmatrix} -1 \end{bmatrix}$  County boundary

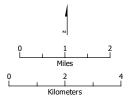
— Highway

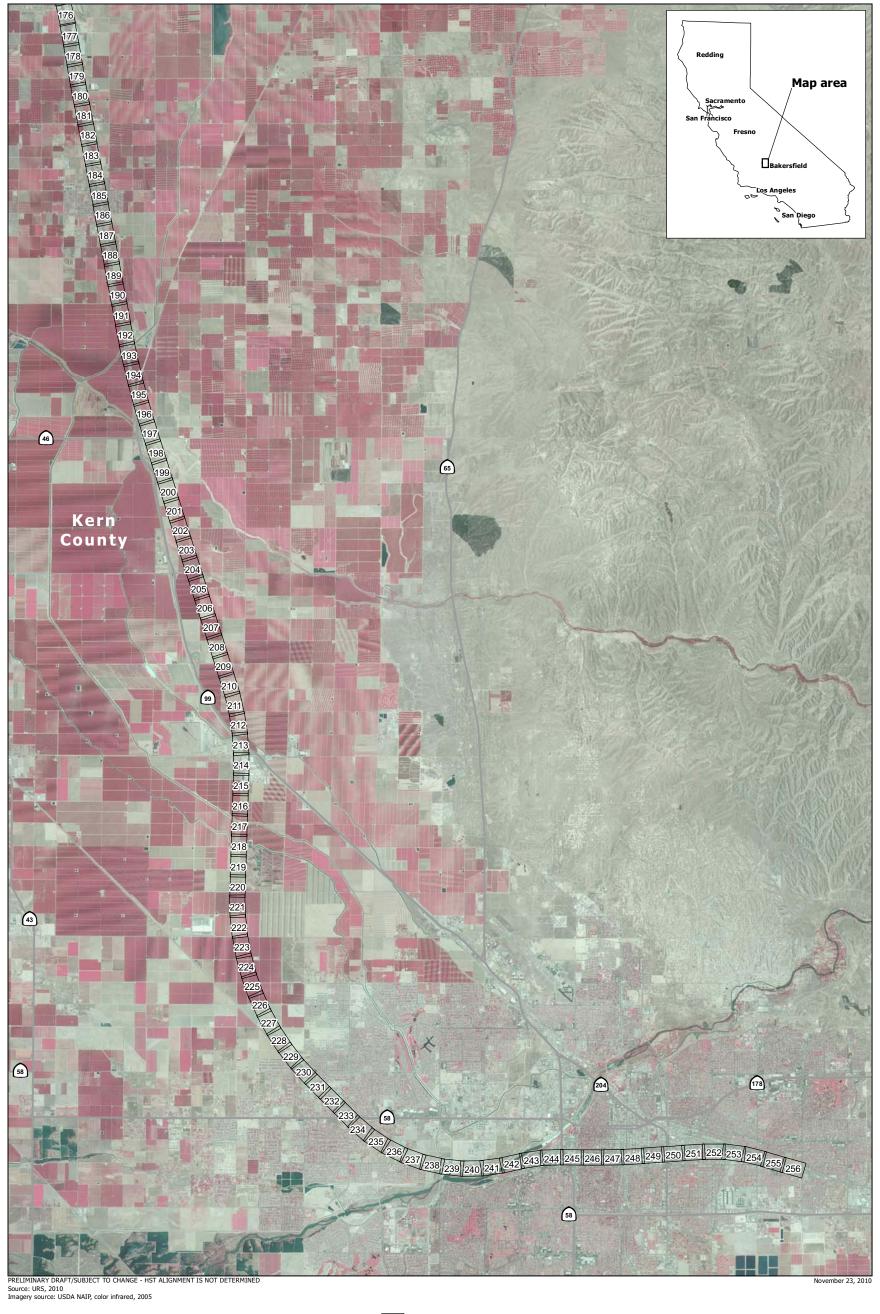


Sheet extent

County boundary

– Highway



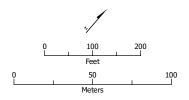


0 1 2 Miles Sheet extent

 $\begin{bmatrix} -1 \end{bmatrix}$  County boundary

— Highway





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

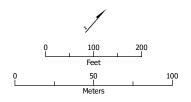
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 1 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

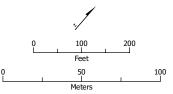
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 2 Estimated special aquatic resources located within the UPRR alternative alignment area





**Special aquatic resources** with feature number

Canal/Ditch

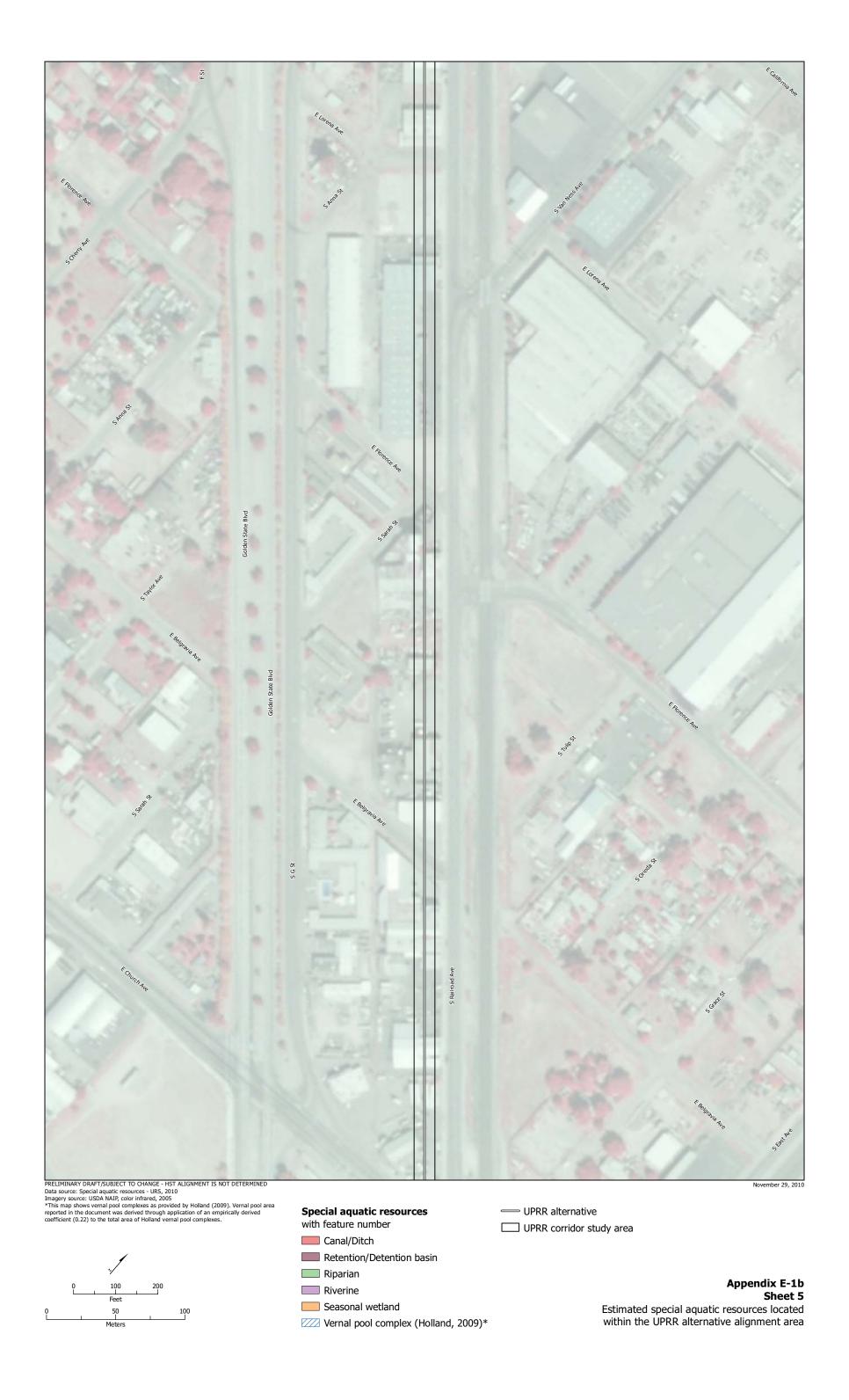
Retention/Detention basin Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

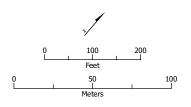
UPRR corridor study area

Appendix E-1b Sheet 3 Estimated special aquatic resources located within the UPRR alternative alignment area









with feature number Canal/Ditch Retention/Detention basin Riparian Riverine

Vernal pool complex (Holland, 2009)\*

Seasonal wetland

UPRR corridor study area

Appendix E-1b Sheet 6 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin Riparian

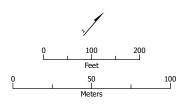
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 7 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

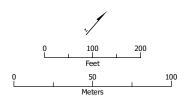
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 8 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 9 Estimated special aquatic resources located within the UPRR alternative alignment area



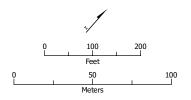
0 100 200 Feet 0 50 100 Retention/Detention basin

Riparian
Riverine

Seasonal wetland
Vernal pool complex (Holland, 2009)\*

Appendix E-1b
Sheet 10
Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 11 Estimated special aquatic resources located within the UPRR alternative alignment area



0 100 200 Feet 0 50 100

Riparian

Riverine

Seasonal wetland

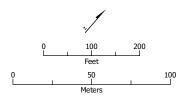
Vernal pool complex (Holland, 2009)\*

Appendix E-1b

Estimated special aquatic resources located within the UPRR alternative alignment area

Sheet 12





with feature number Canal/Ditch

Retention/Detention basin Riparian

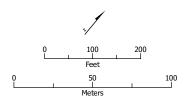
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 13 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch Retention/Detention basin

Riparian Riverine

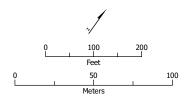
> Seasonal wetland Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 14 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

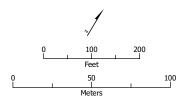
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 15 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area





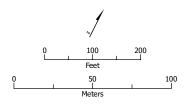
with feature number Canal/Ditch Retention/Detention basin Riparian

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 16 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

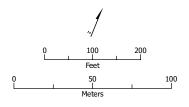
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 17 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

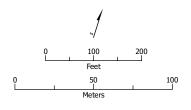
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 18 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

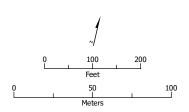
Retention/Detention basin Riparian

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 19 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

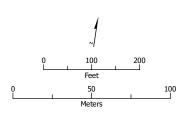
UPRR corridor study area

Appendix E-1b Sheet 20 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

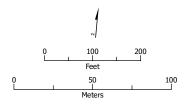
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 21 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
Data source: Special aquatic resources - URS, 2010
Imagery source: USDA NAIP, color infrared, 2005
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



## **Special aquatic resources**

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

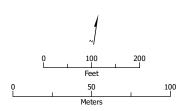
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 22 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

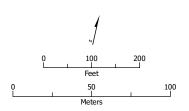
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 23 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

Riverine Seasonal wetland

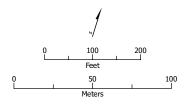
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 24 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

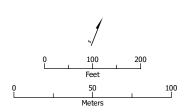
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 25 Estimated special aquatic resources located within the UPRR alternative alignment area





**Special aquatic resources** with feature number

Canal/Ditch

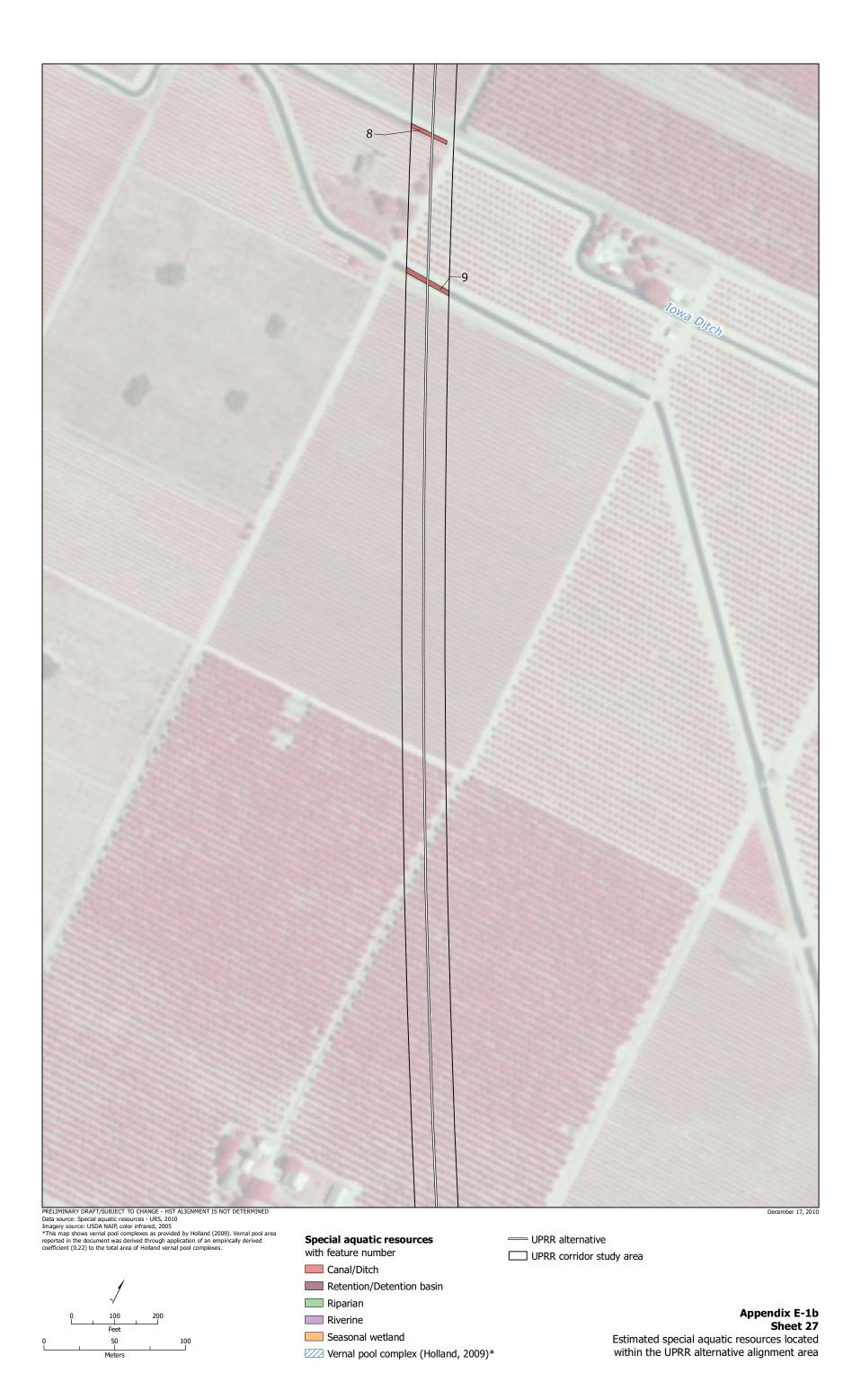
Retention/Detention basin

Riparian Riverine

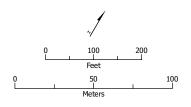
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 26 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number Canal/Ditch Retention/Detention basin Riparian Riverine

Vernal pool complex (Holland, 2009)\*

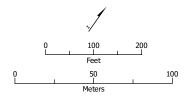
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 28 Estimated special aquatic resources located within the UPRR alternative alignment area





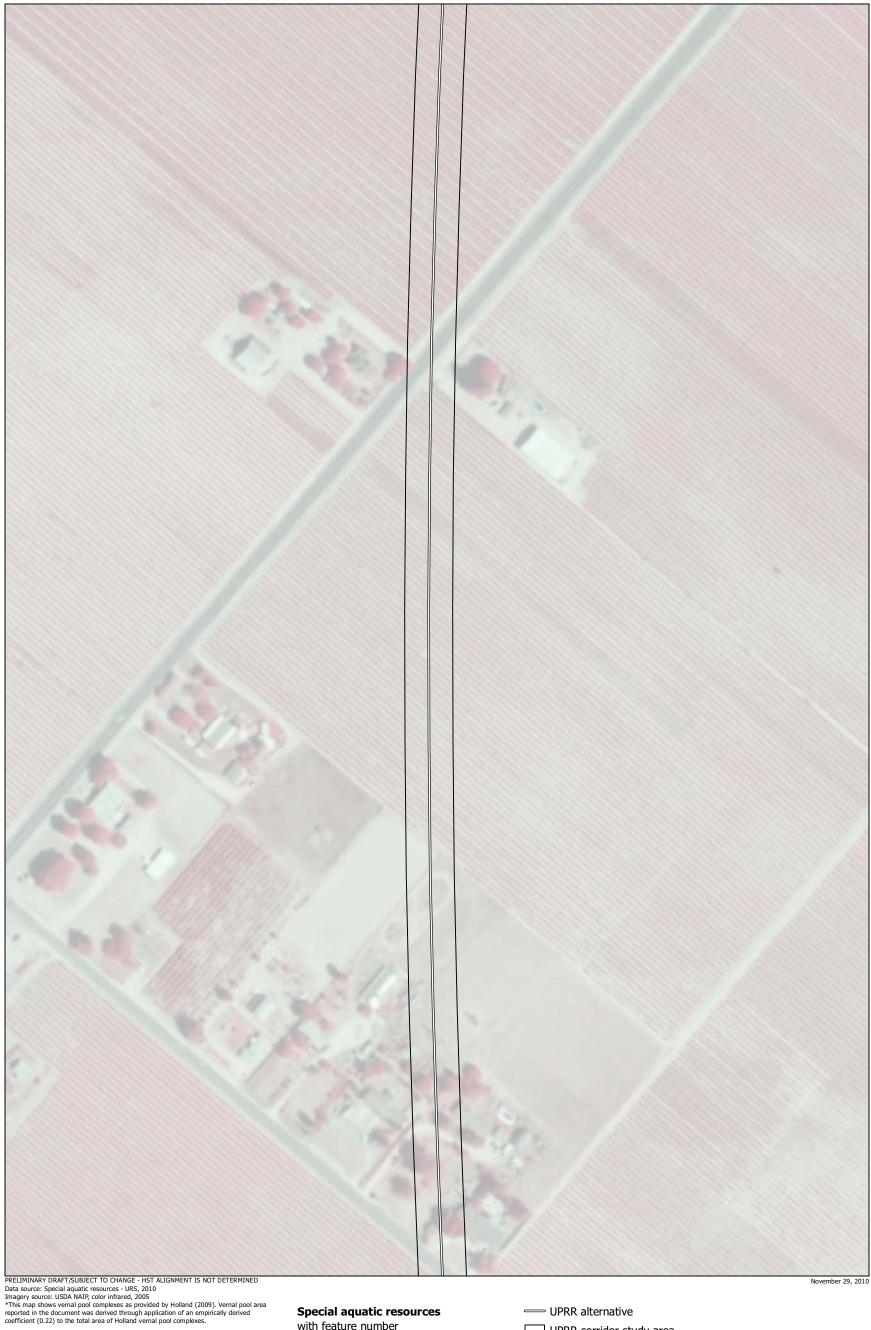
with feature number Canal/Ditch Retention/Detention basin

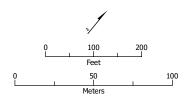
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 29 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch Retention/Detention basin Riparian Riverine

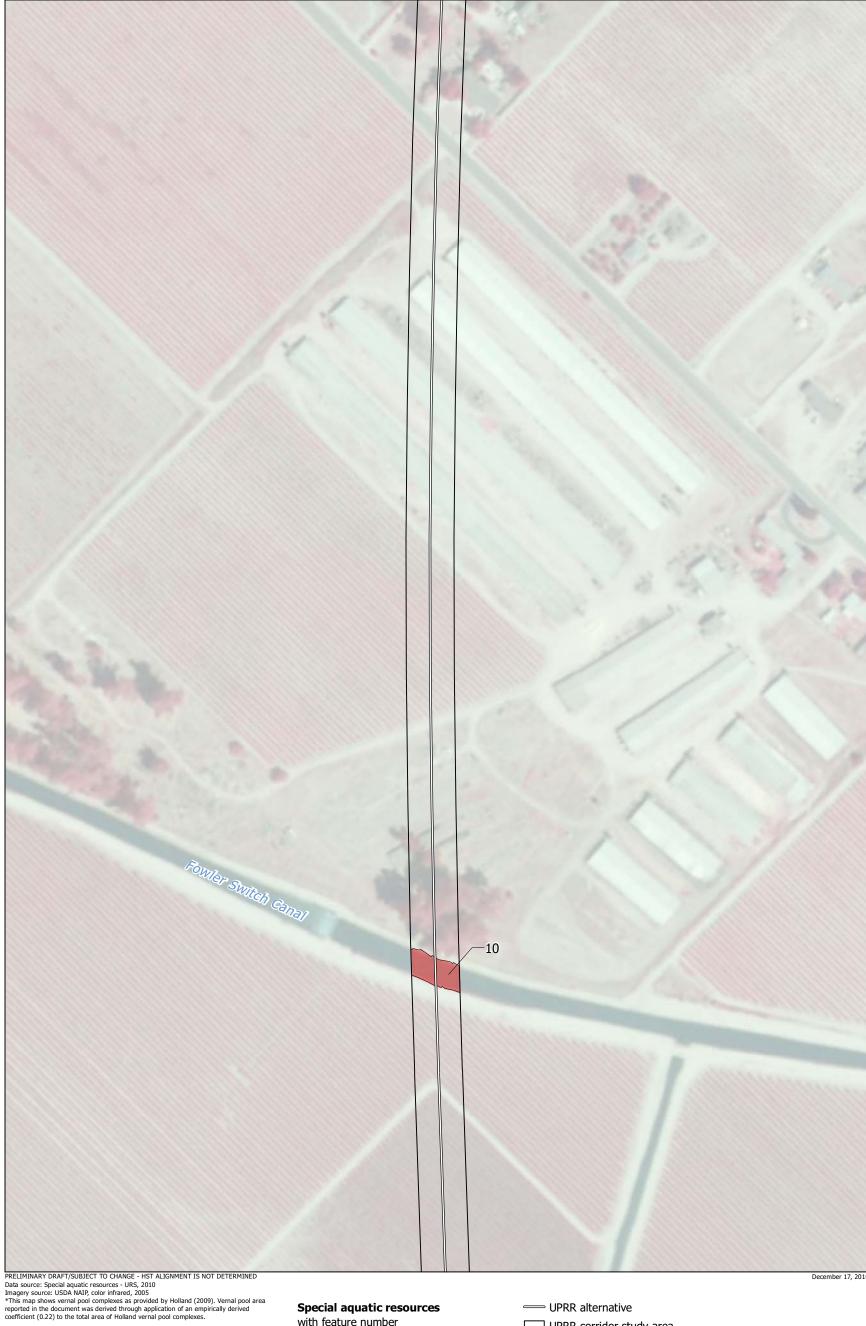
Vernal pool complex (Holland, 2009)\*

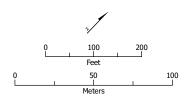
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 30 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

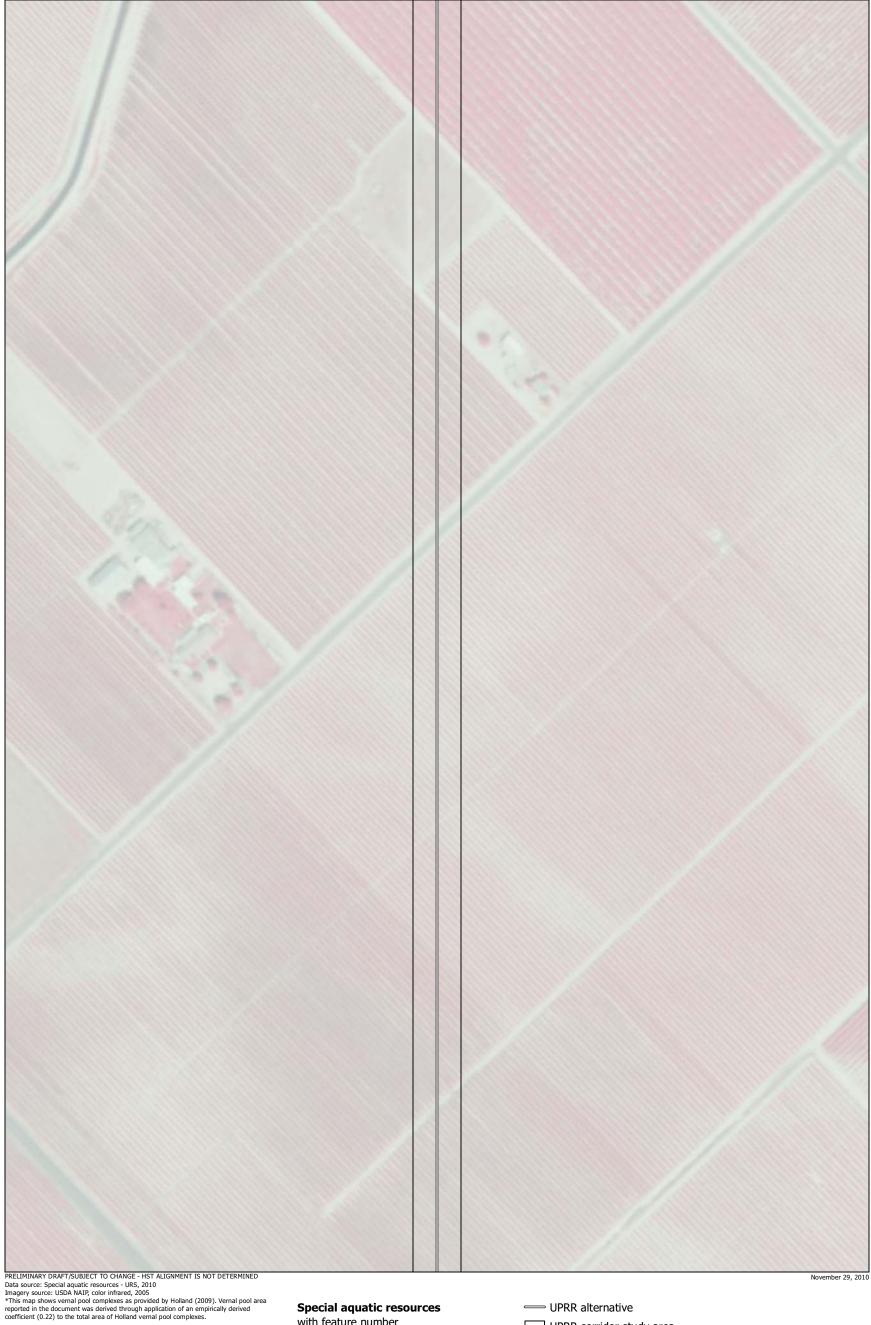
Riparian Riverine

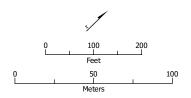
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 31 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number Canal/Ditch

Retention/Detention basin

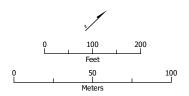
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 33 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

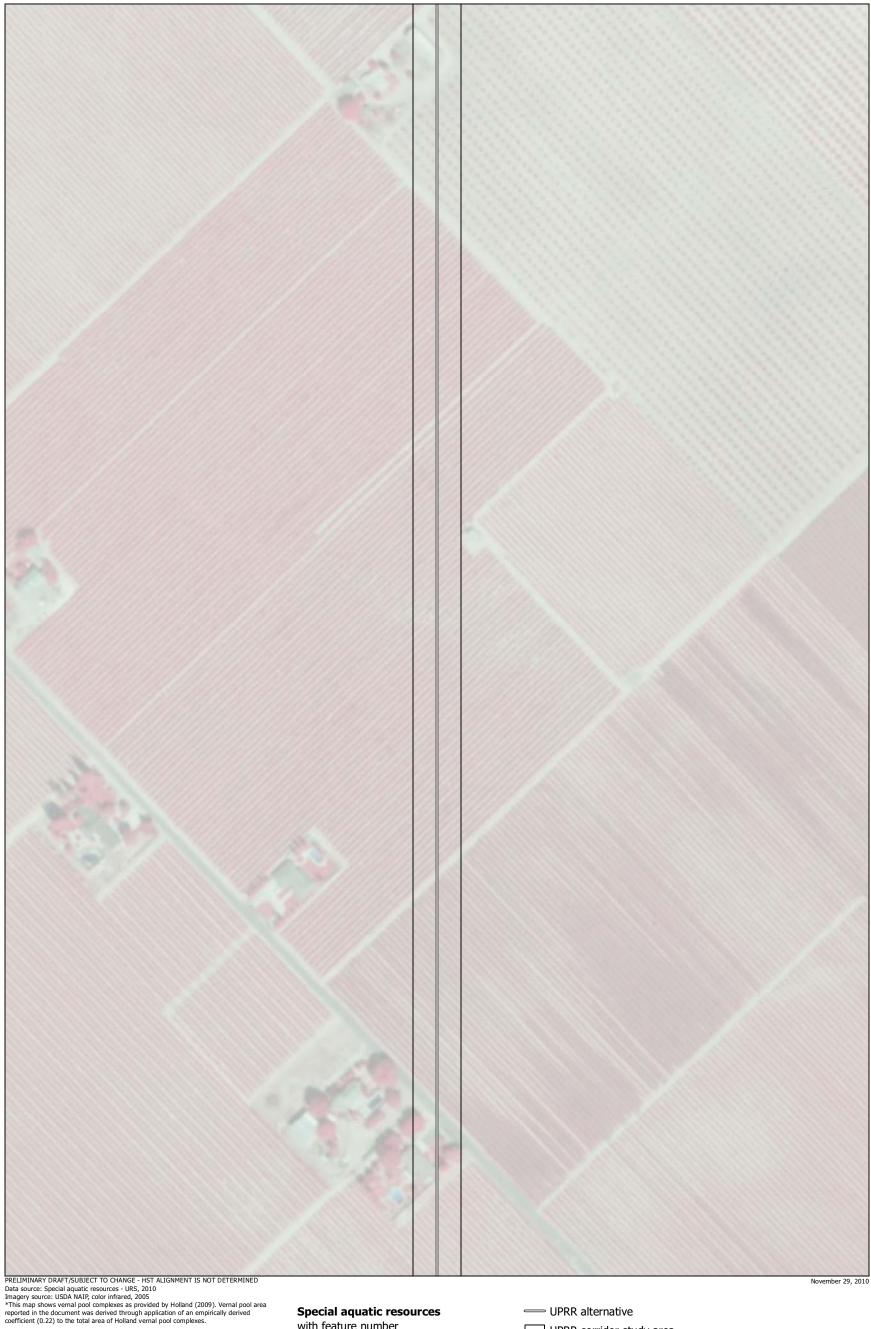
Retention/Detention basin

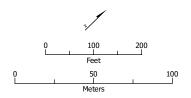
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 34 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

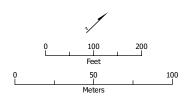
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 35 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

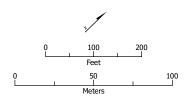
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 36 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

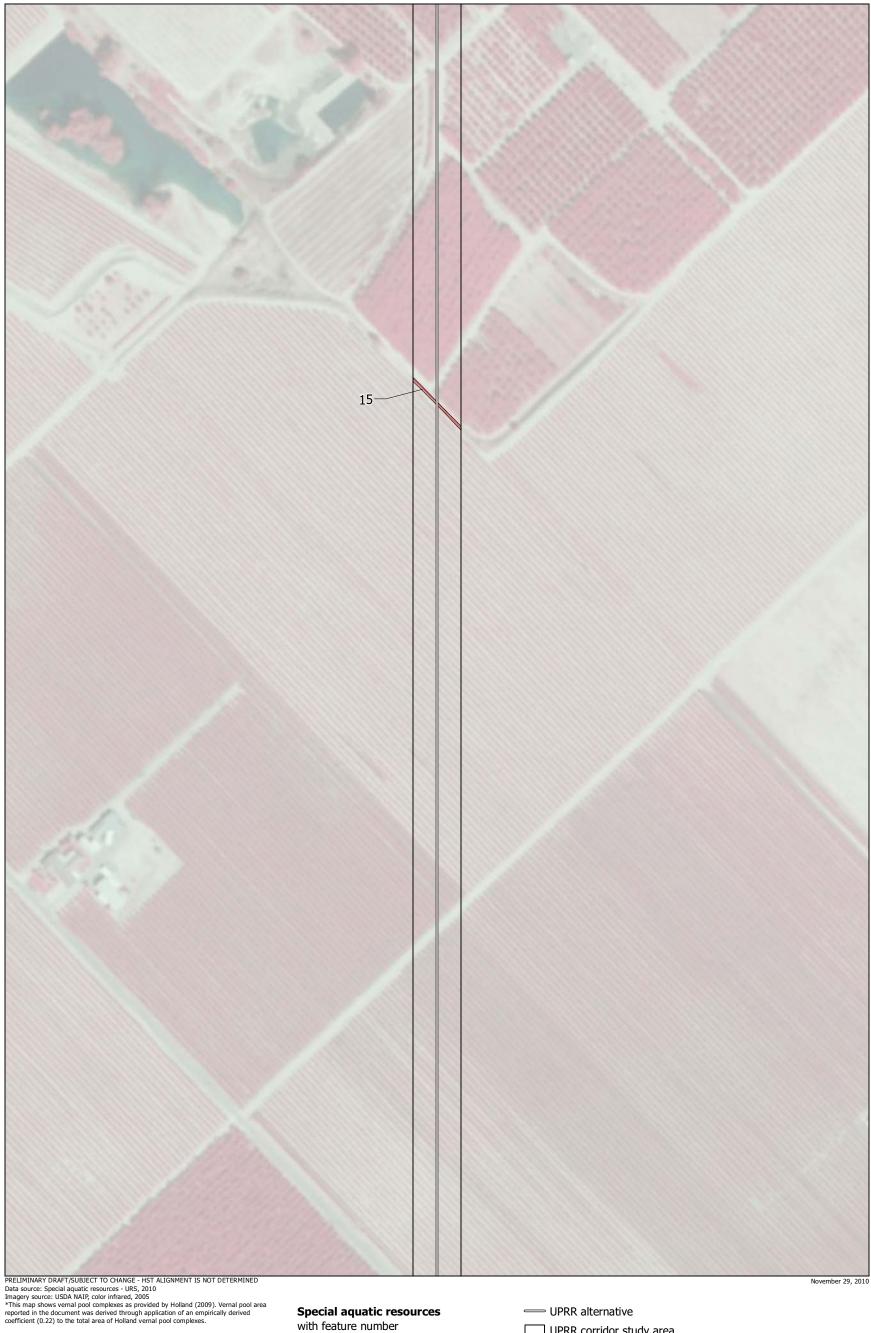
Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 37 Estimated special aquatic resources located within the UPRR alternative alignment area



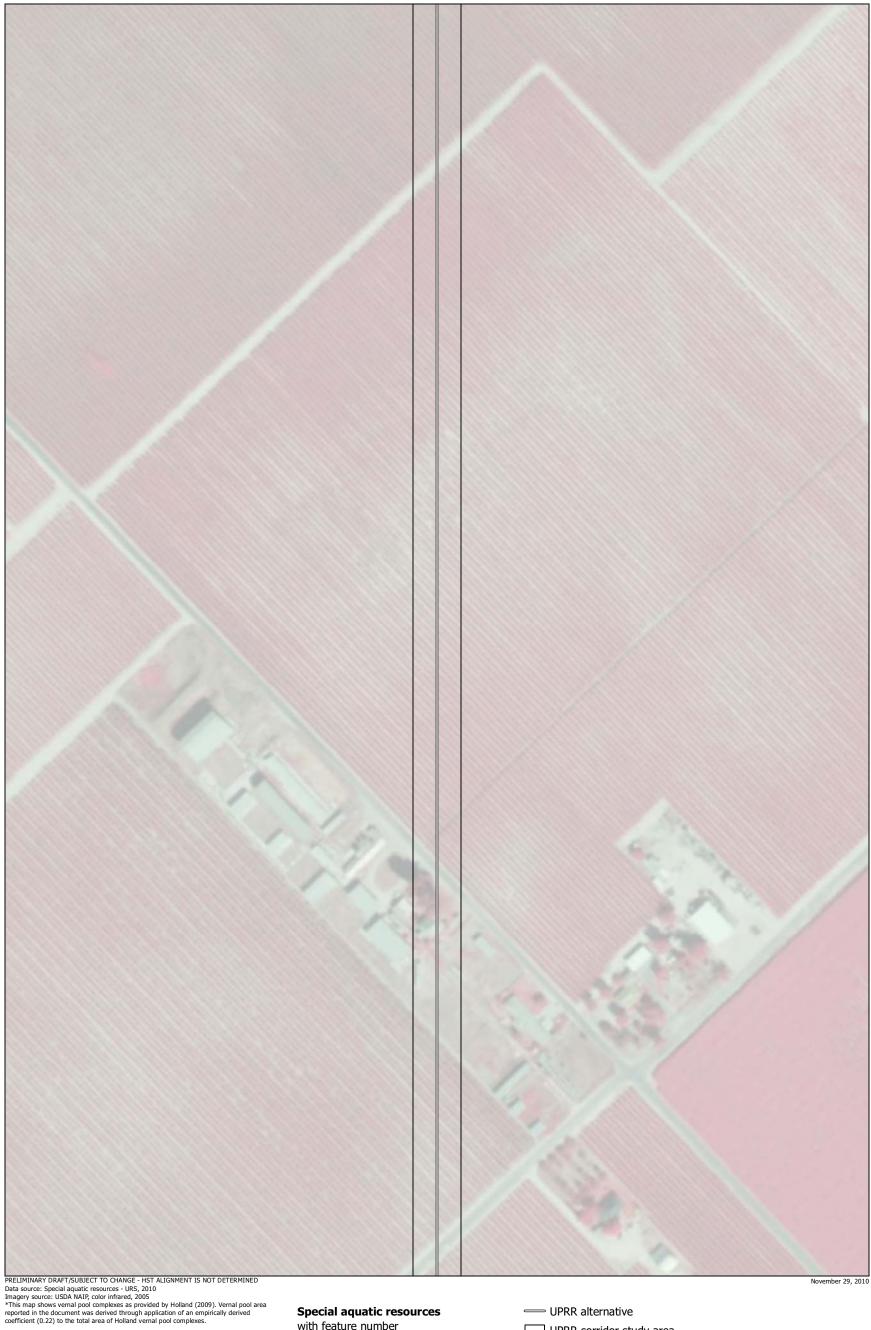
with feature number Canal/Ditch Retention/Detention basin Riparian Riverine Seasonal wetland

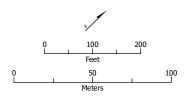
Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 38 Estimated special aquatic resources located within the UPRR alternative alignment area







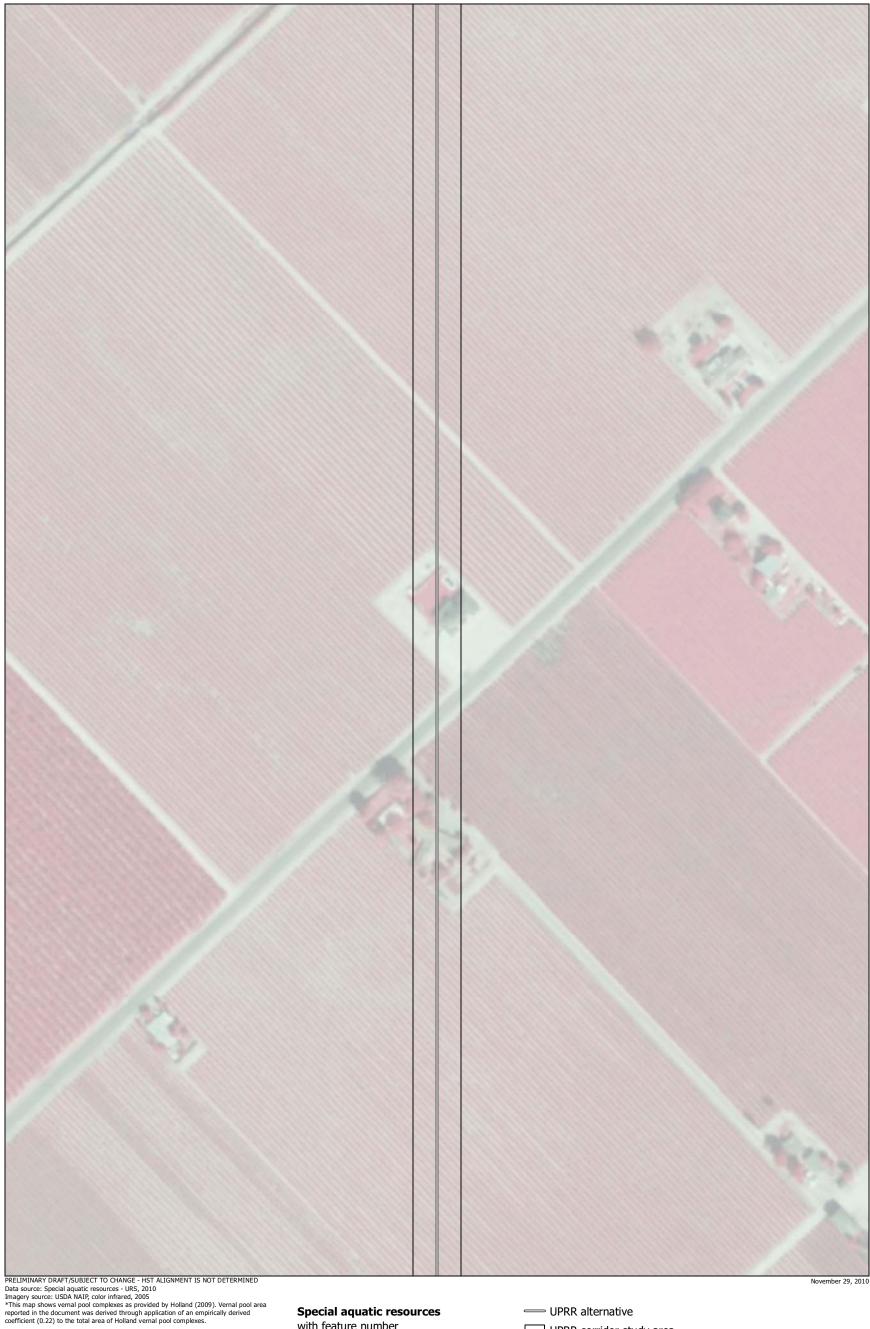
Retention/Detention basin

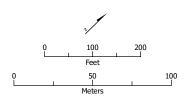
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 40 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

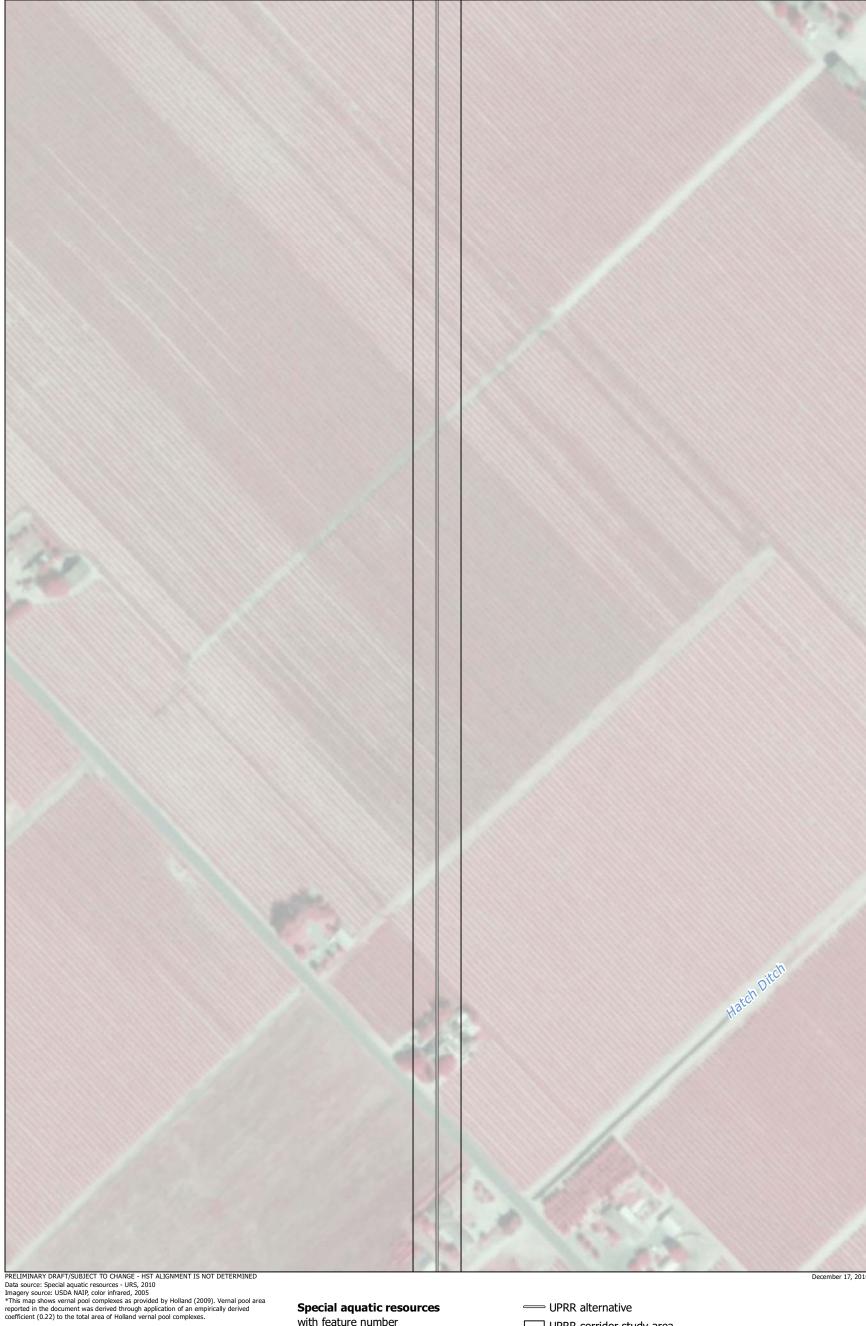
Riparian Riverine

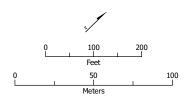
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 42 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

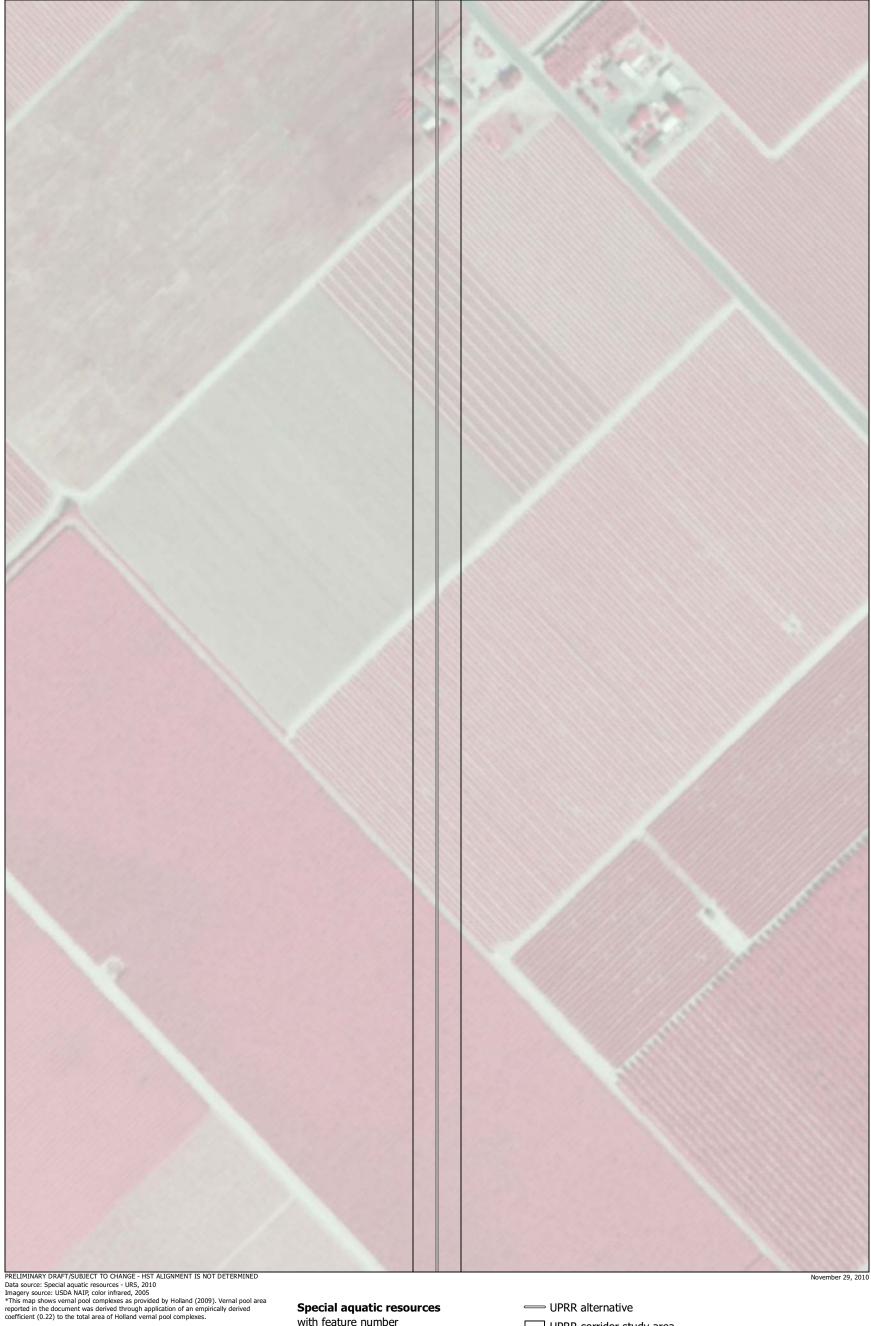
Riparian

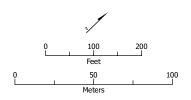
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 43 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

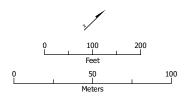
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 44 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

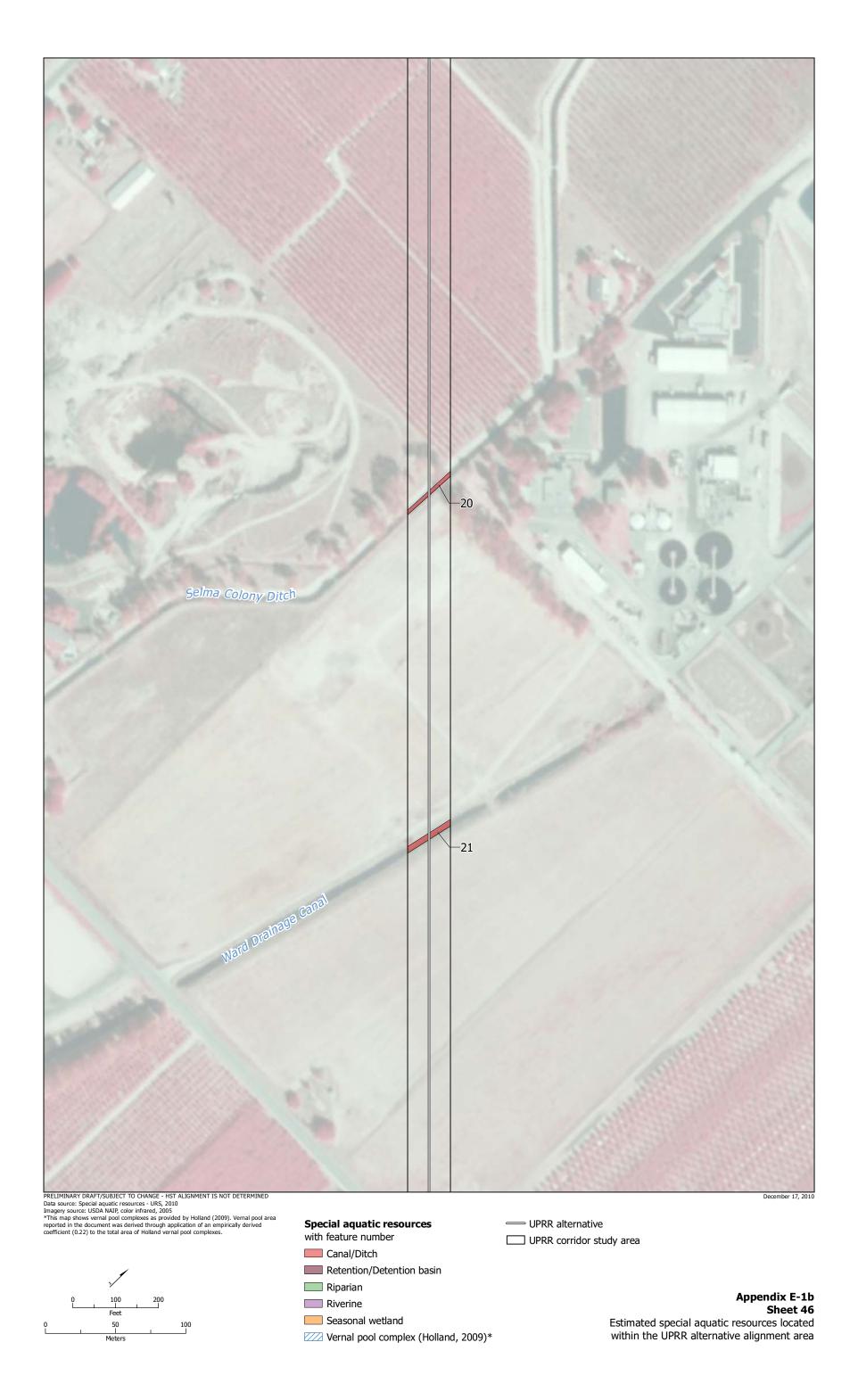
Retention/Detention basin Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 45 Estimated special aquatic resources located within the UPRR alternative alignment area



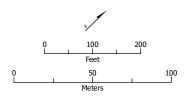


with feature number Canal/Ditch Retention/Detention basin Riparian

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 47 Estimated special aquatic resources located within the UPRR alternative alignment area





Retention/Detention basin Riparian

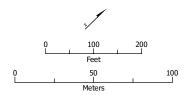
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 48 Estimated special aquatic resources located within the UPRR alternative alignment area





Vernal pool complex (Holland, 2009)\*

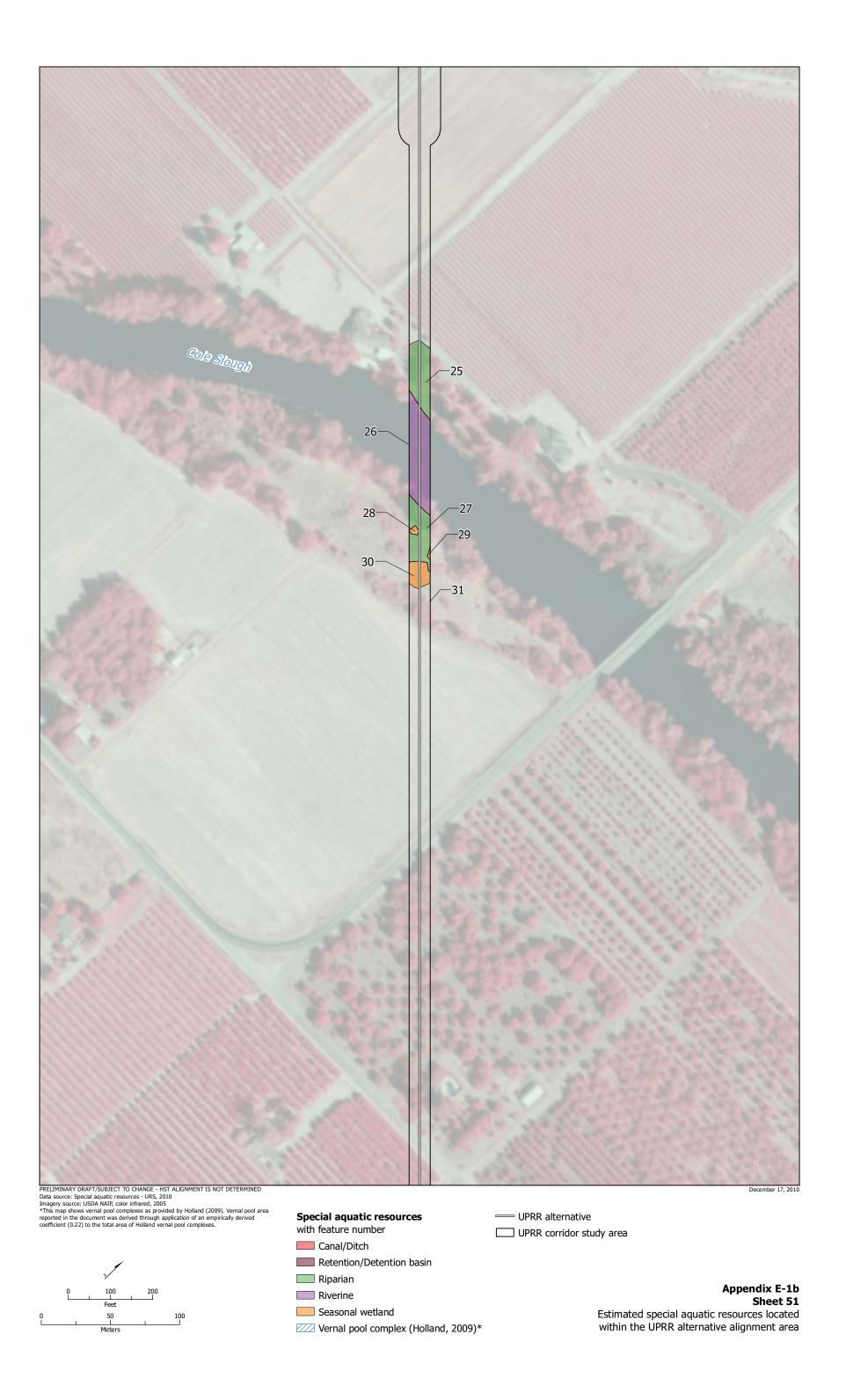
with feature number Canal/Ditch

Retention/Detention basin Riparian

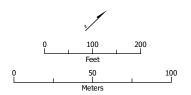
Riverine Seasonal wetland UPRR corridor study area

Appendix E-1b Sheet 49 Estimated special aquatic resources located within the UPRR alternative alignment area









with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 52 Estimated special aquatic resources located within the UPRR alternative alignment area





Retention/Detention basin Riparian

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 54 Estimated special aquatic resources located within the UPRR alternative alignment area



Retention/Detention basin Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 55 Estimated special aquatic resources located within the UPRR alternative alignment area



Canal/Ditch

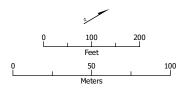
Retention/Detention basin Riparian

Vernal pool complex (Holland, 2009)\*

Riverine Seasonal wetland UPRR corridor study area

Appendix E-1b Sheet 56 Estimated special aquatic resources located within the UPRR alternative alignment area



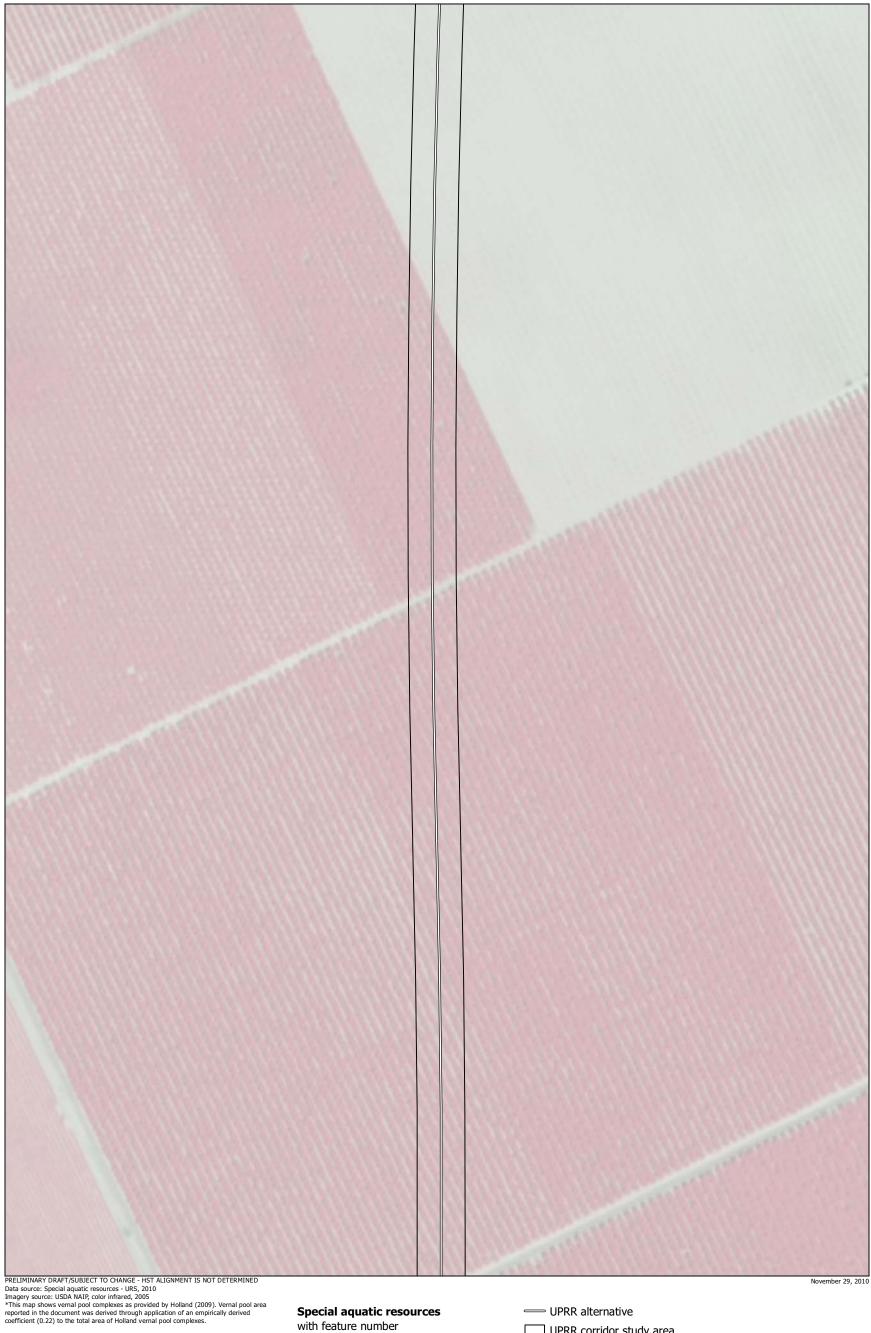


Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 57 Estimated special aquatic resources located within the UPRR alternative alignment area

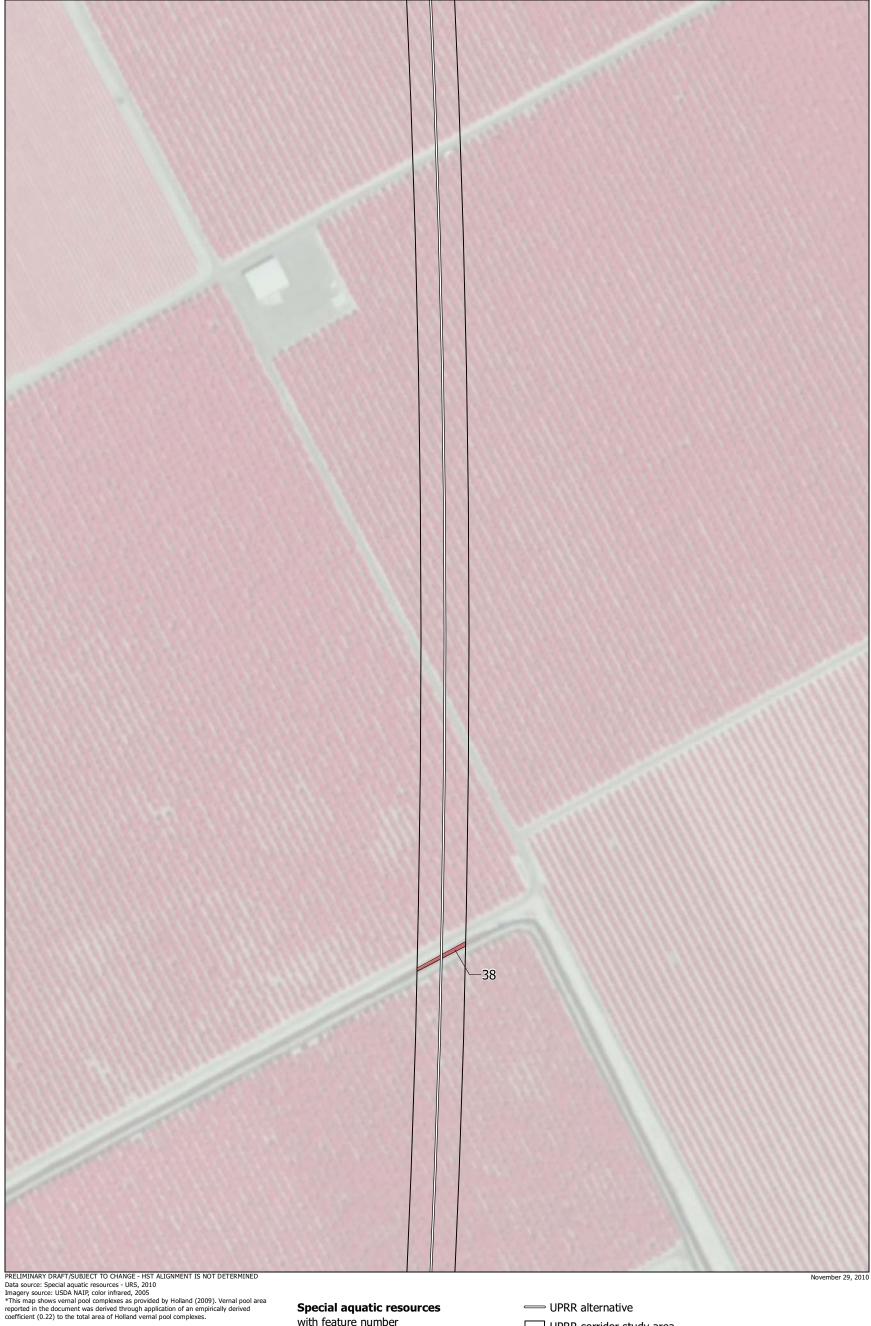


Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 58 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

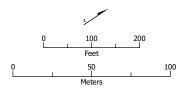
Canal/Ditch

Retention/Detention basin Riparian

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 59 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 60 Estimated special aquatic resources located within the UPRR alternative alignment area

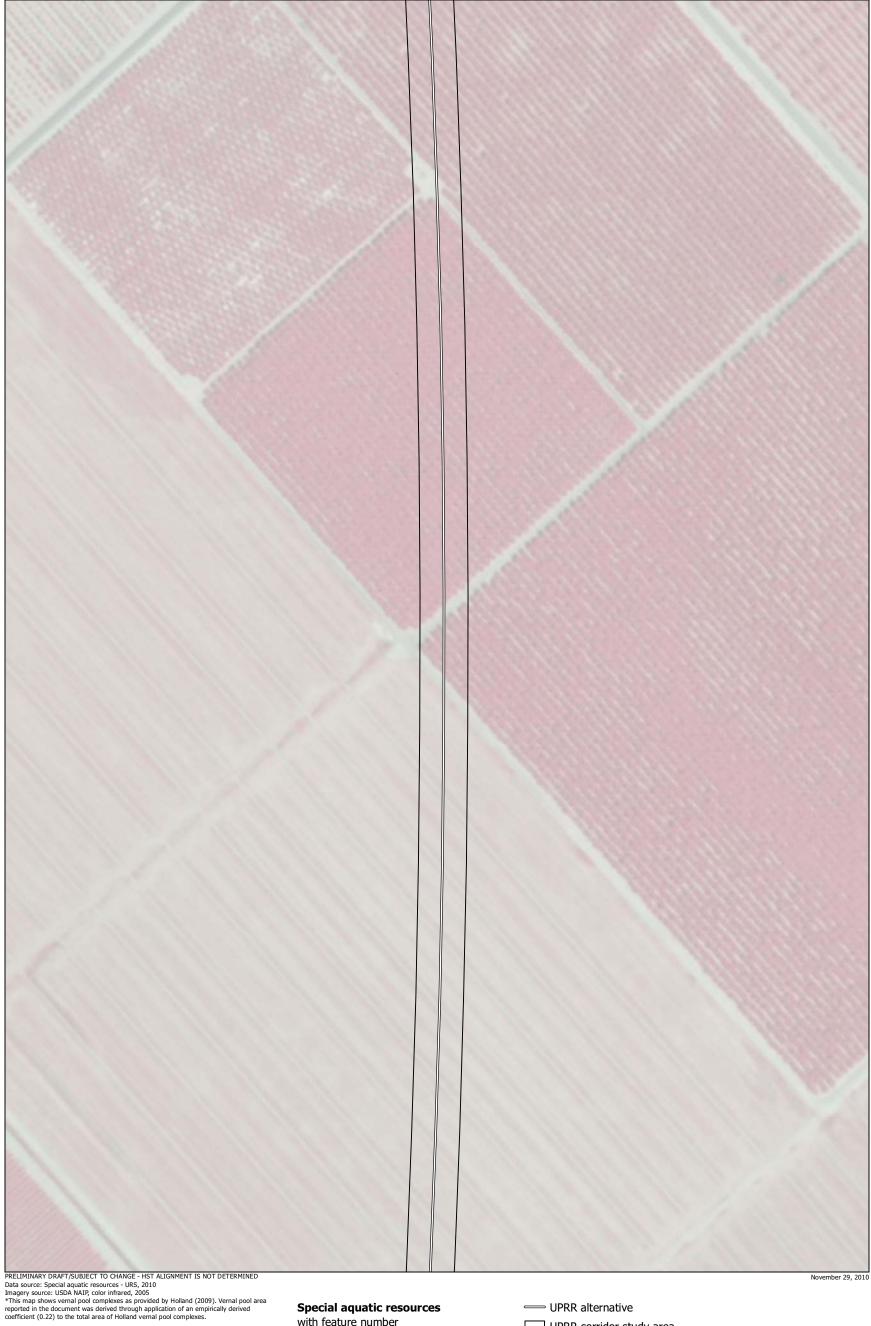


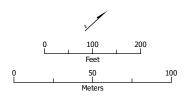
Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 61 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

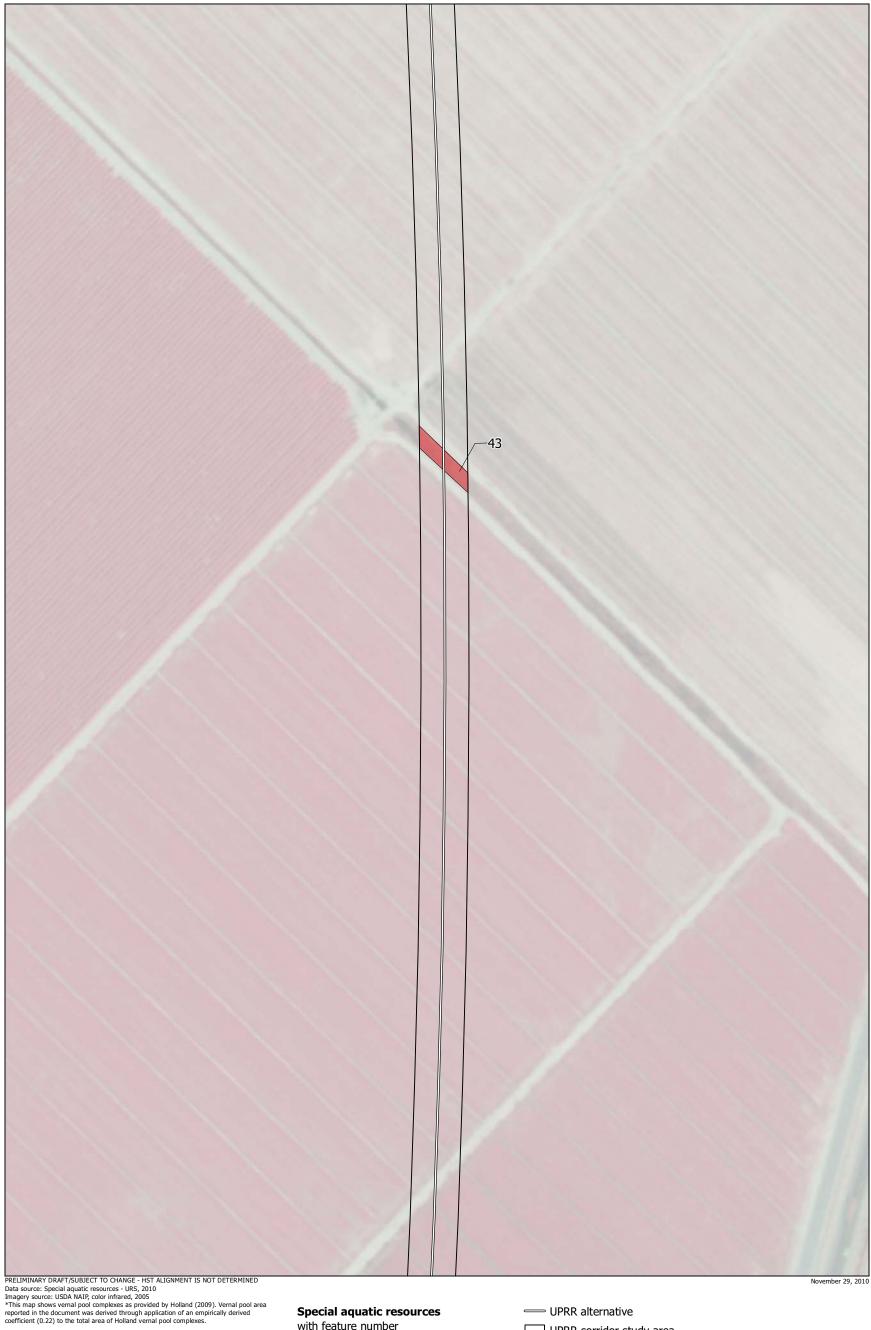
Riverine

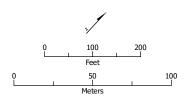
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 62 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

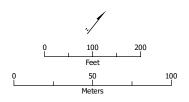
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 63 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

Riverine Seasonal wetland

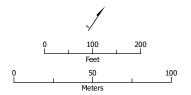
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 64 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

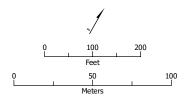
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 65 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

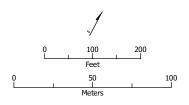
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 66 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

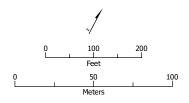
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 67 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
Data source: Special aquatic resources - URS, 2010
Imagery source: USDA NAIP, color infrared, 2005
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

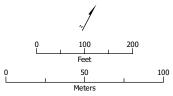
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 68 Estimated special aquatic resources located within the UPRR alternative alignment area





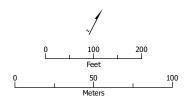
Canal/Ditch Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 69 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

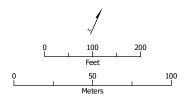
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 70 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

Riverine

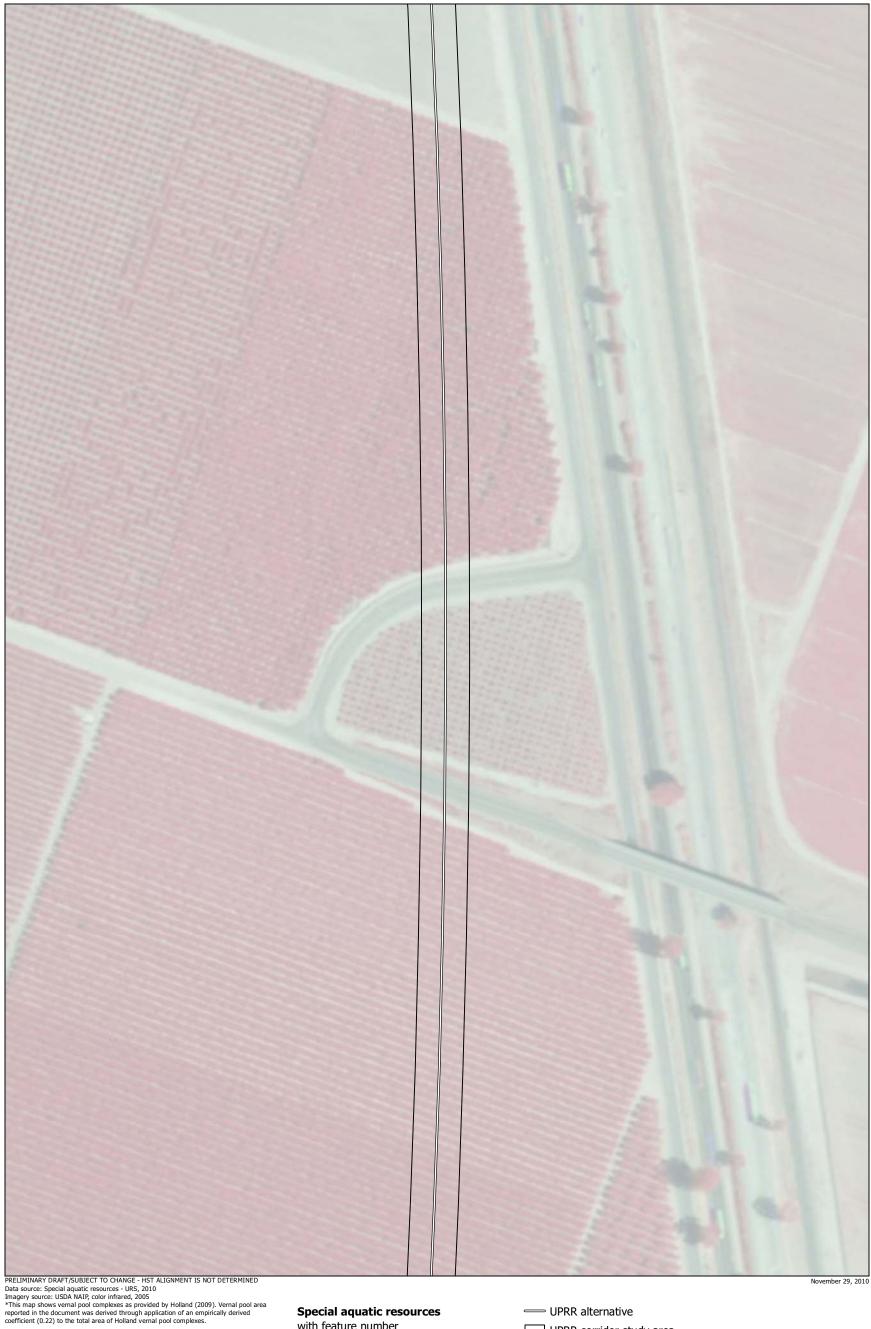
Seasonal wetland

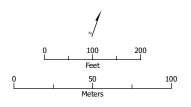
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 71 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

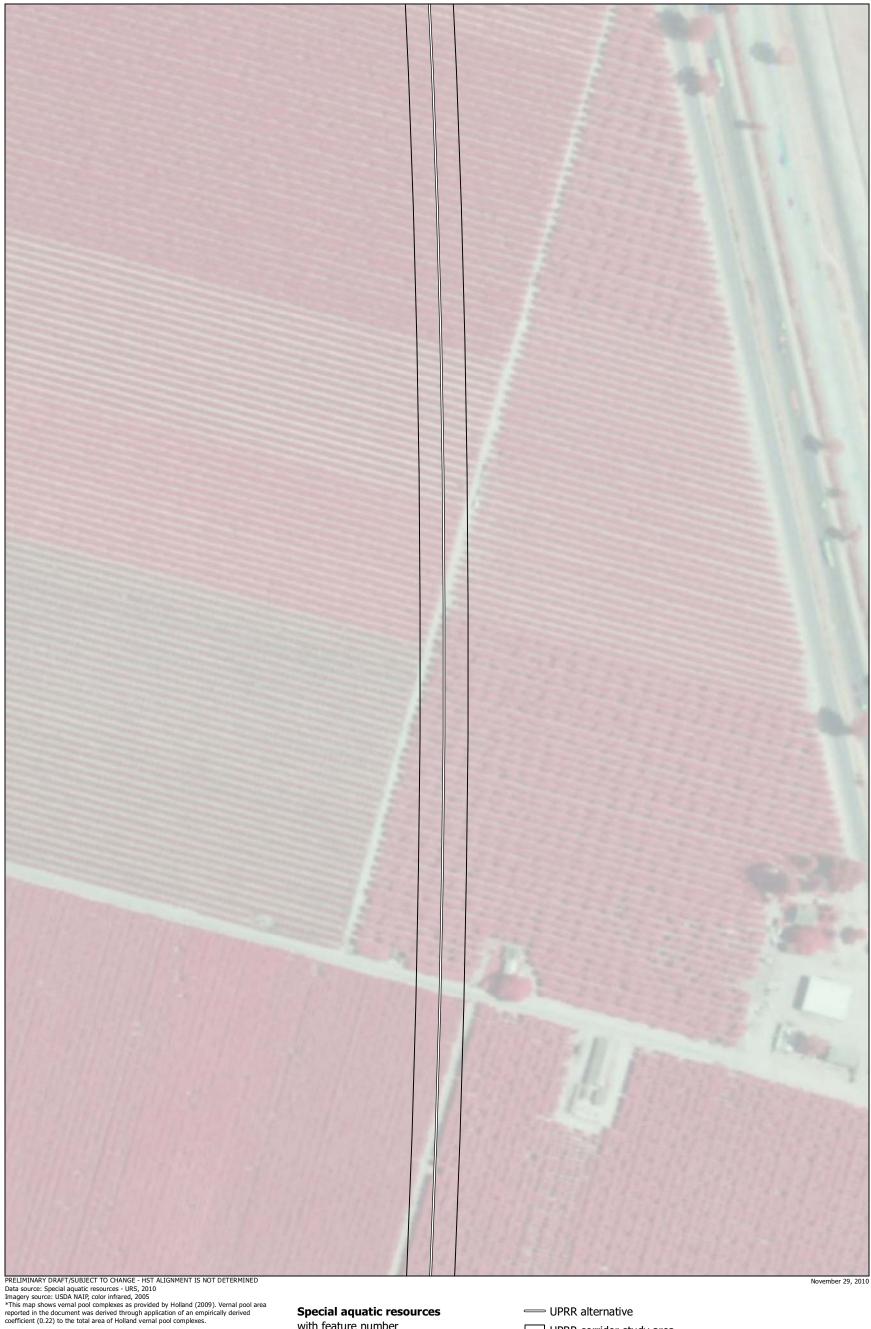
Retention/Detention basin

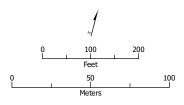
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 72 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

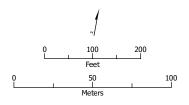
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 73 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

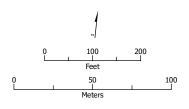
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 74 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
Data source: Special aquatic resources - URS, 2010
Imagery source: USDA NAIP, color infrared, 2005
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

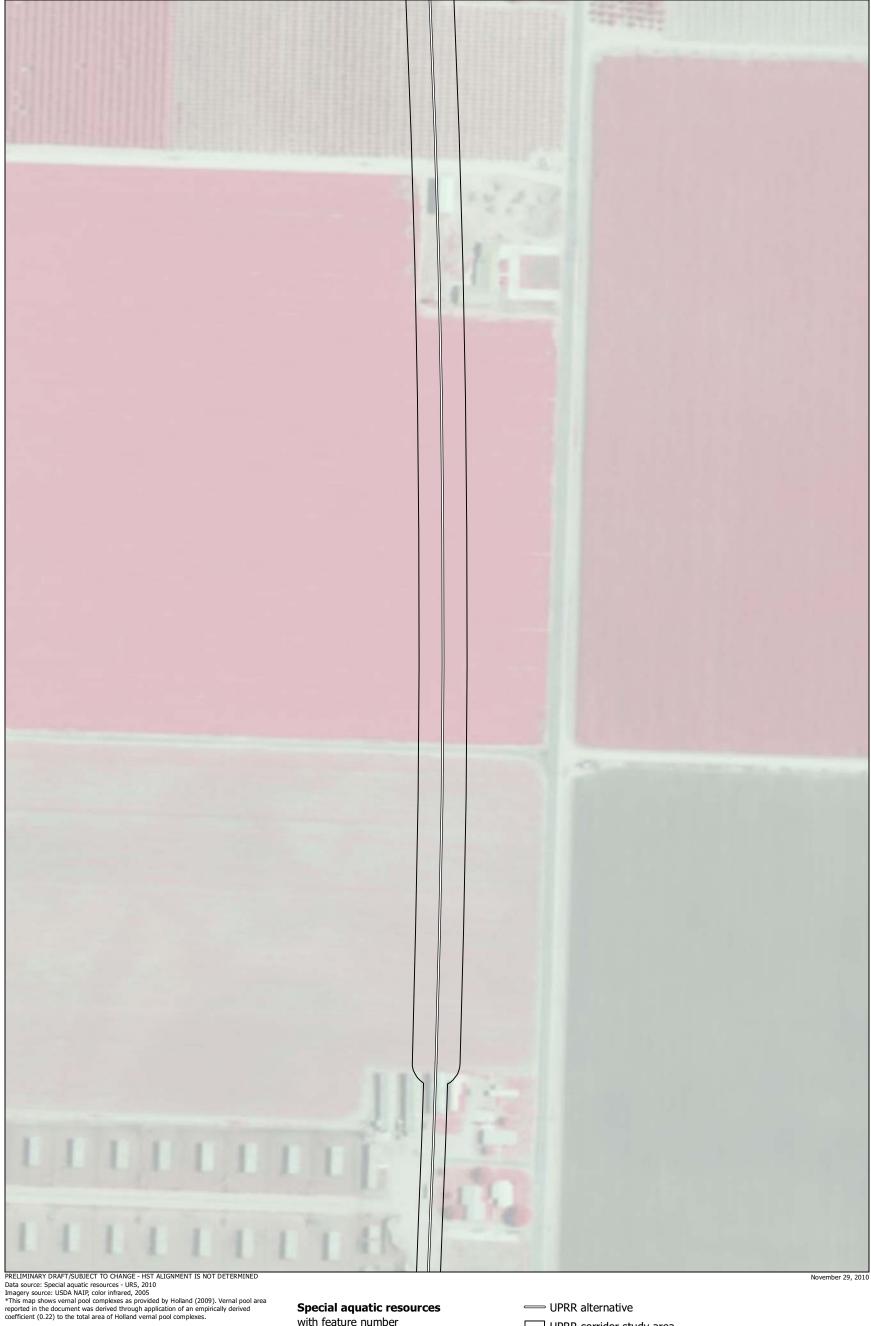
Riverine Seasonal wetland

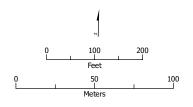
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 75 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

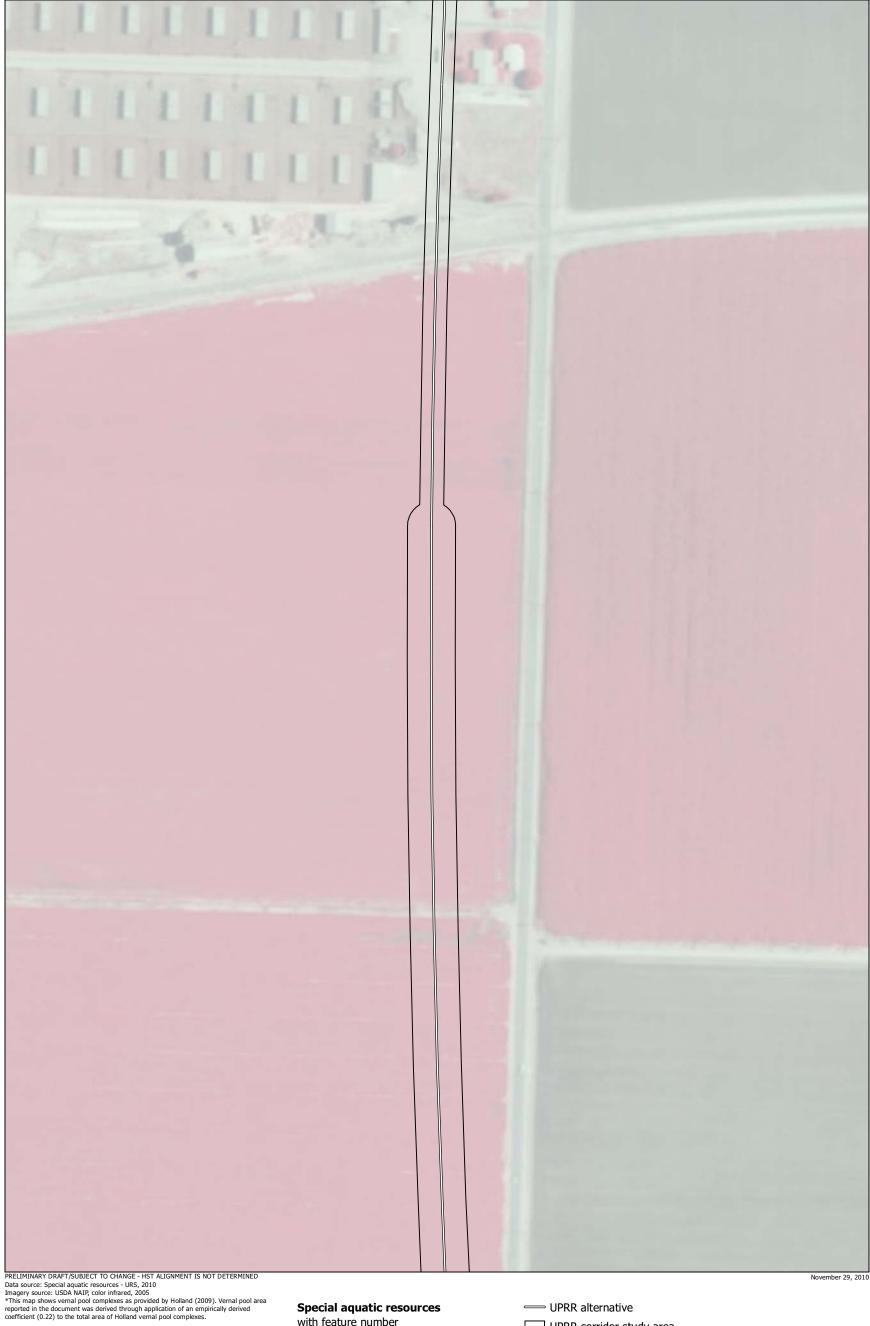
Riverine Seasonal wetland

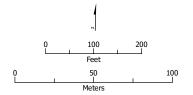
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 76 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

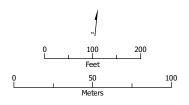
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 77 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

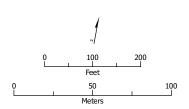
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 78 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

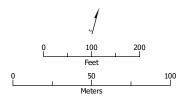
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 79 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

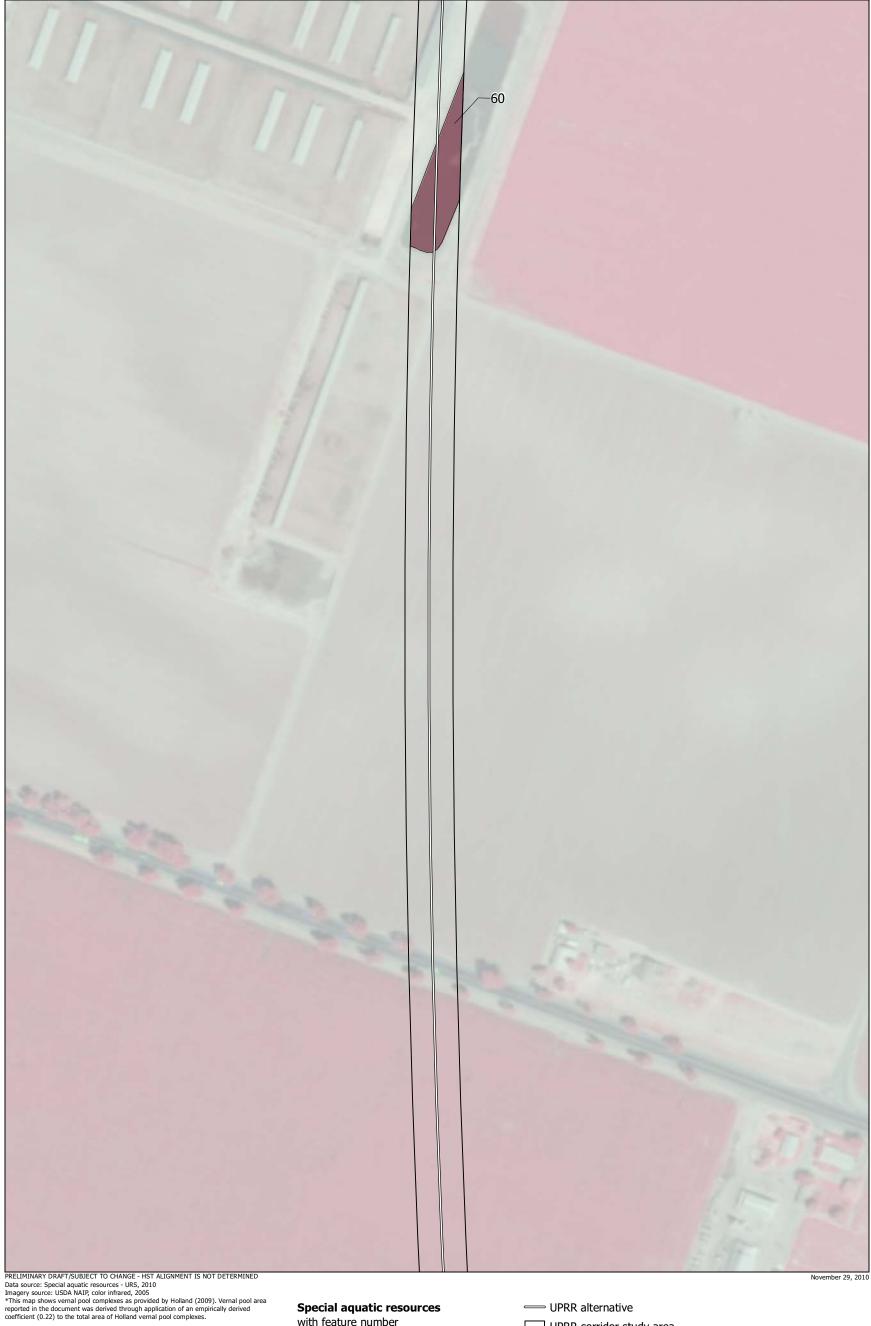
Riverine Seasonal wetland

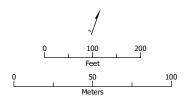
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 80 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

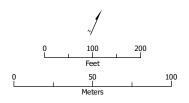
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 81 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

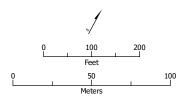
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 82 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 83 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 84 Estimated special aquatic resources located within the UPRR alternative alignment area



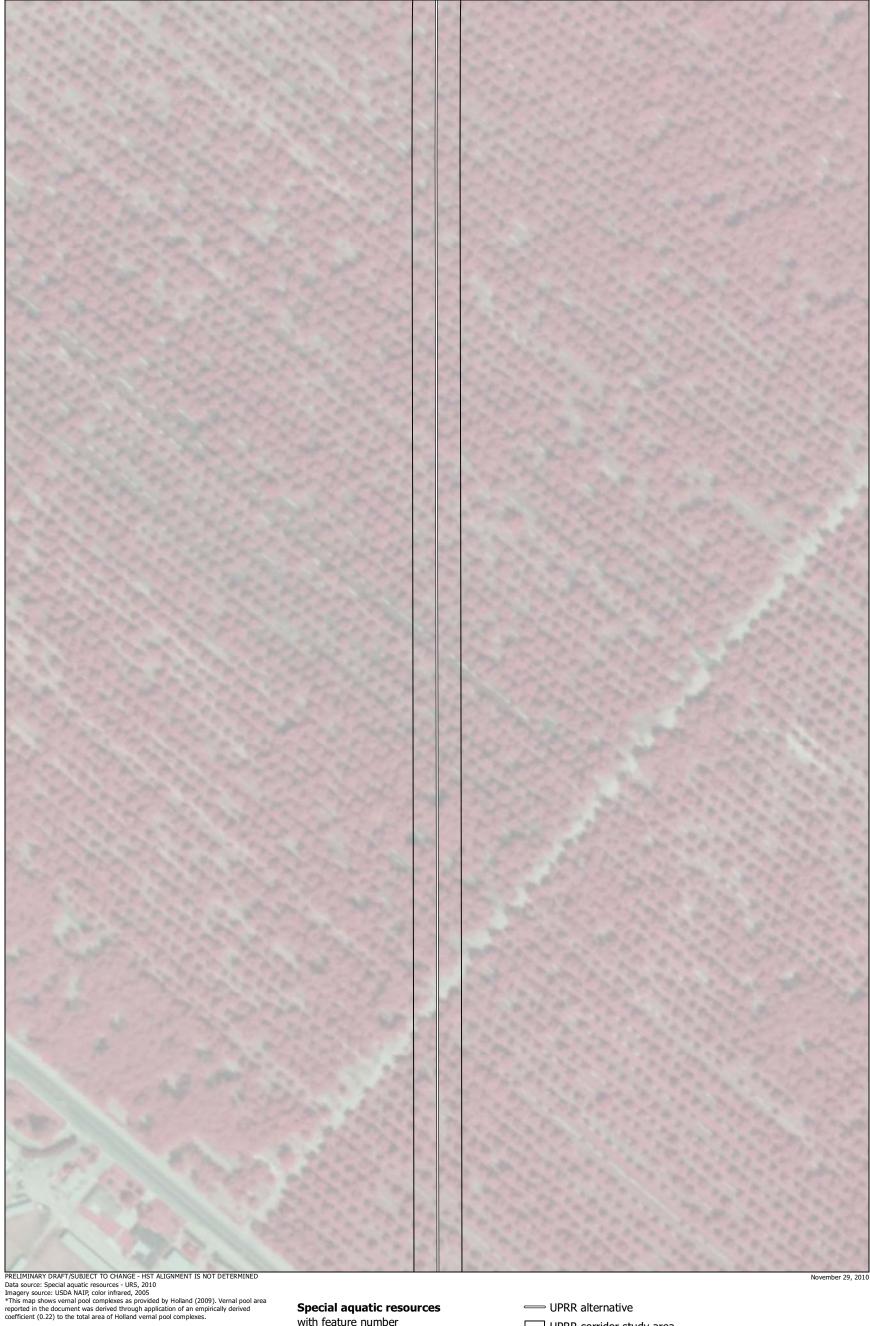
with feature number

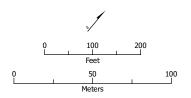
Canal/Ditch Retention/Detention basin Riparian

UPRR corridor study area

Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 85 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

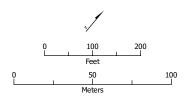
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 86 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

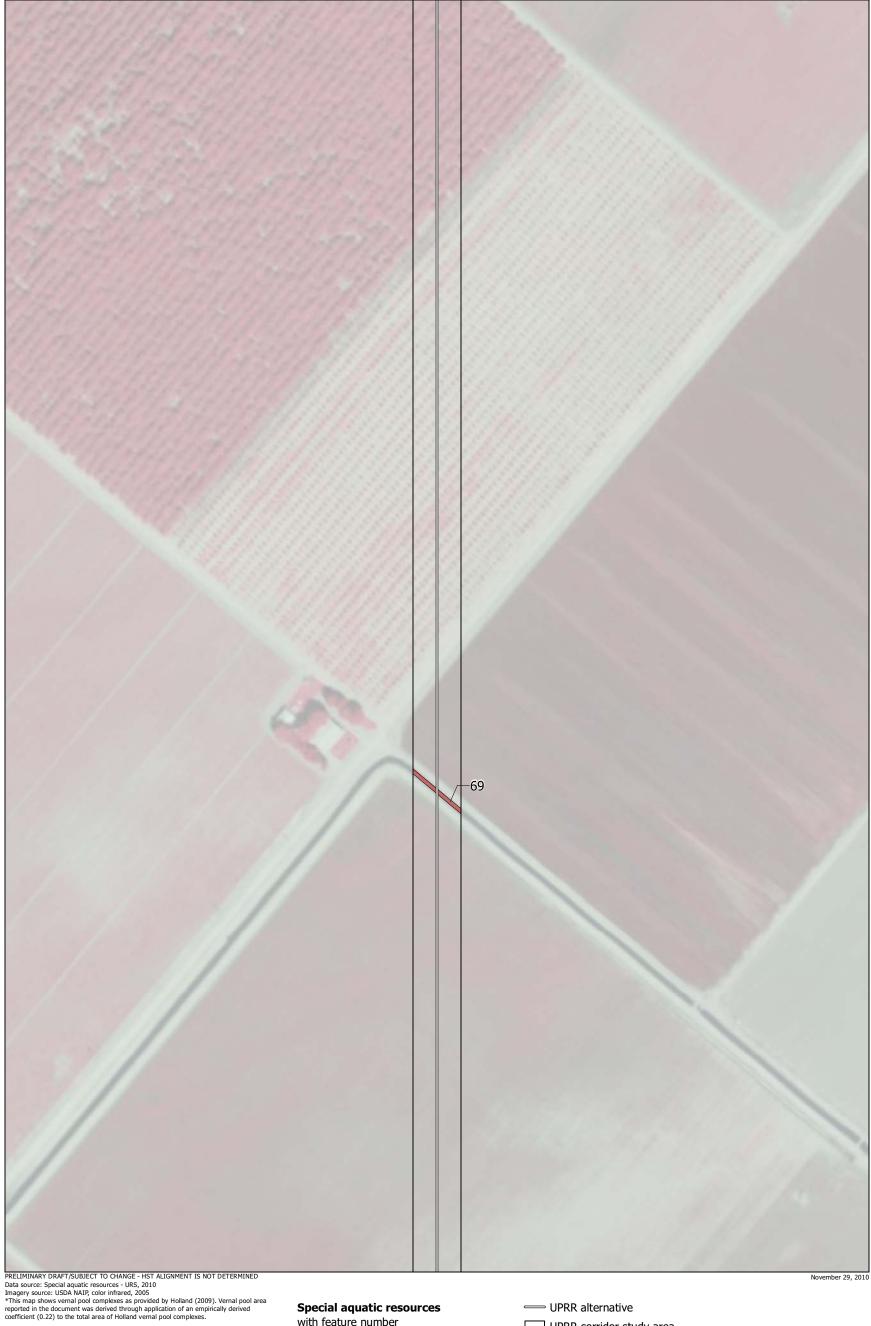
Riparian Riverine

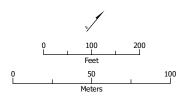
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 87 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

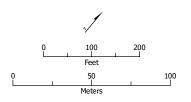
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 88 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

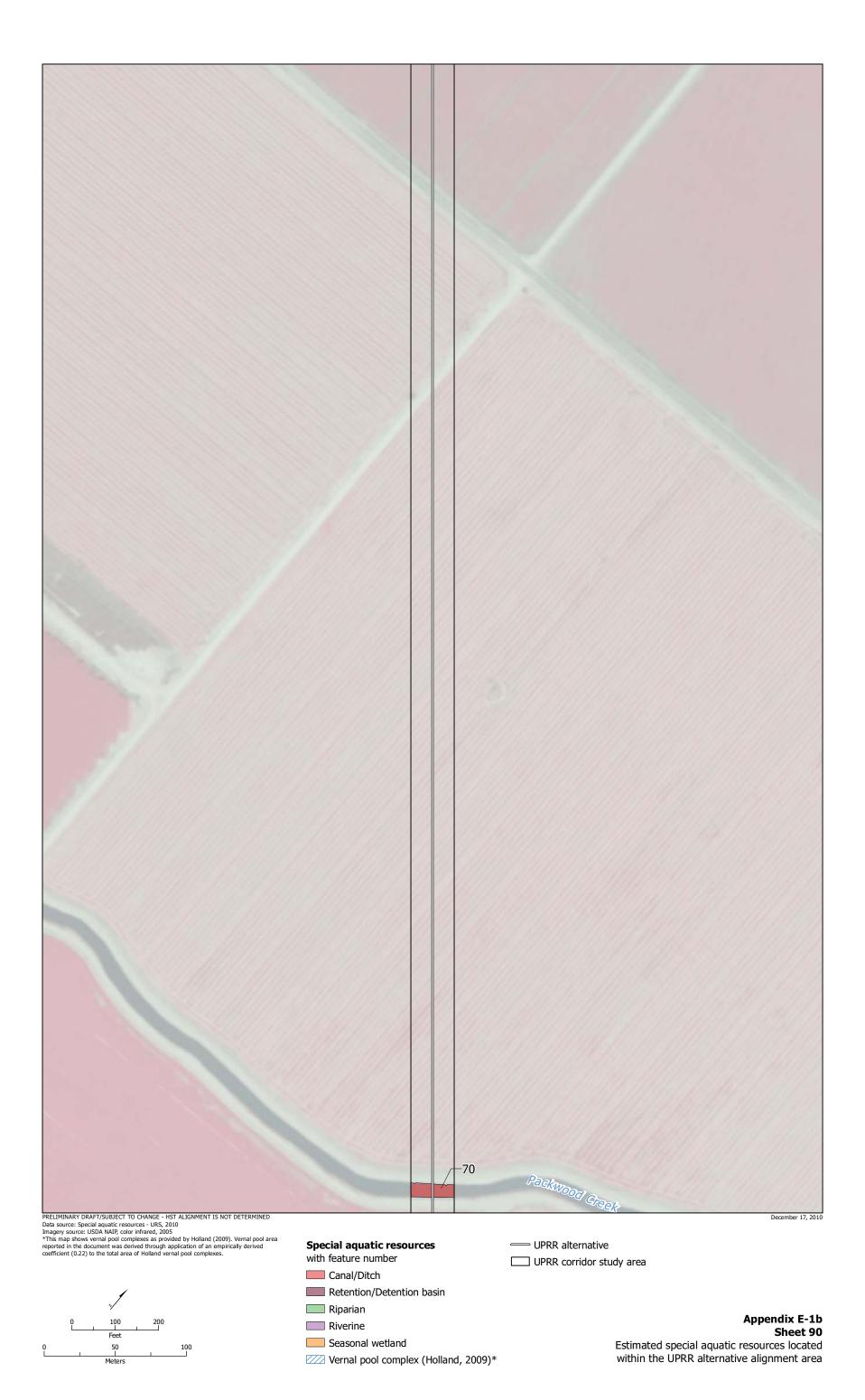
Retention/Detention basin Riparian

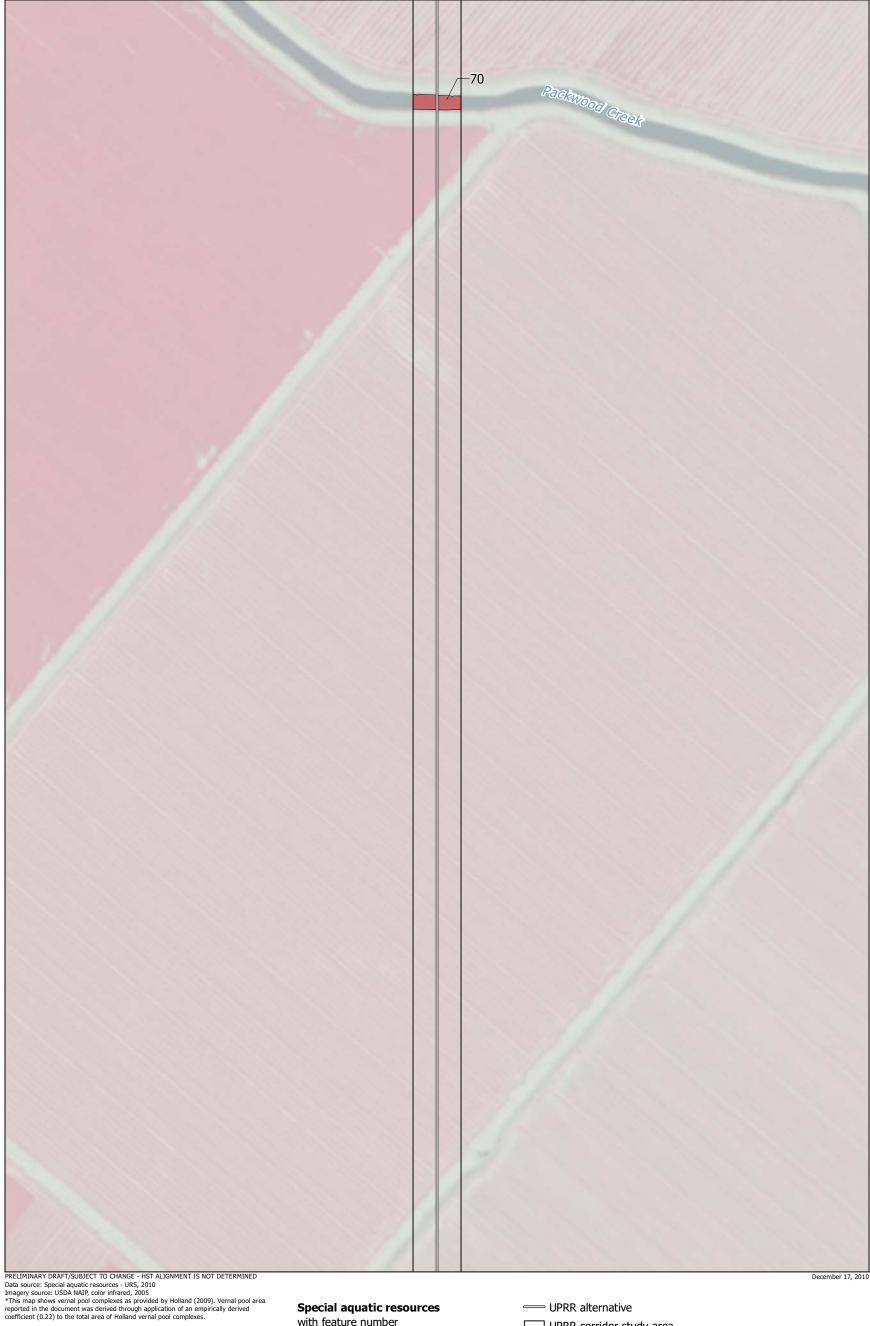
Riverine

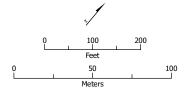
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 89 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number

Canal/Ditch Retention/Detention basin

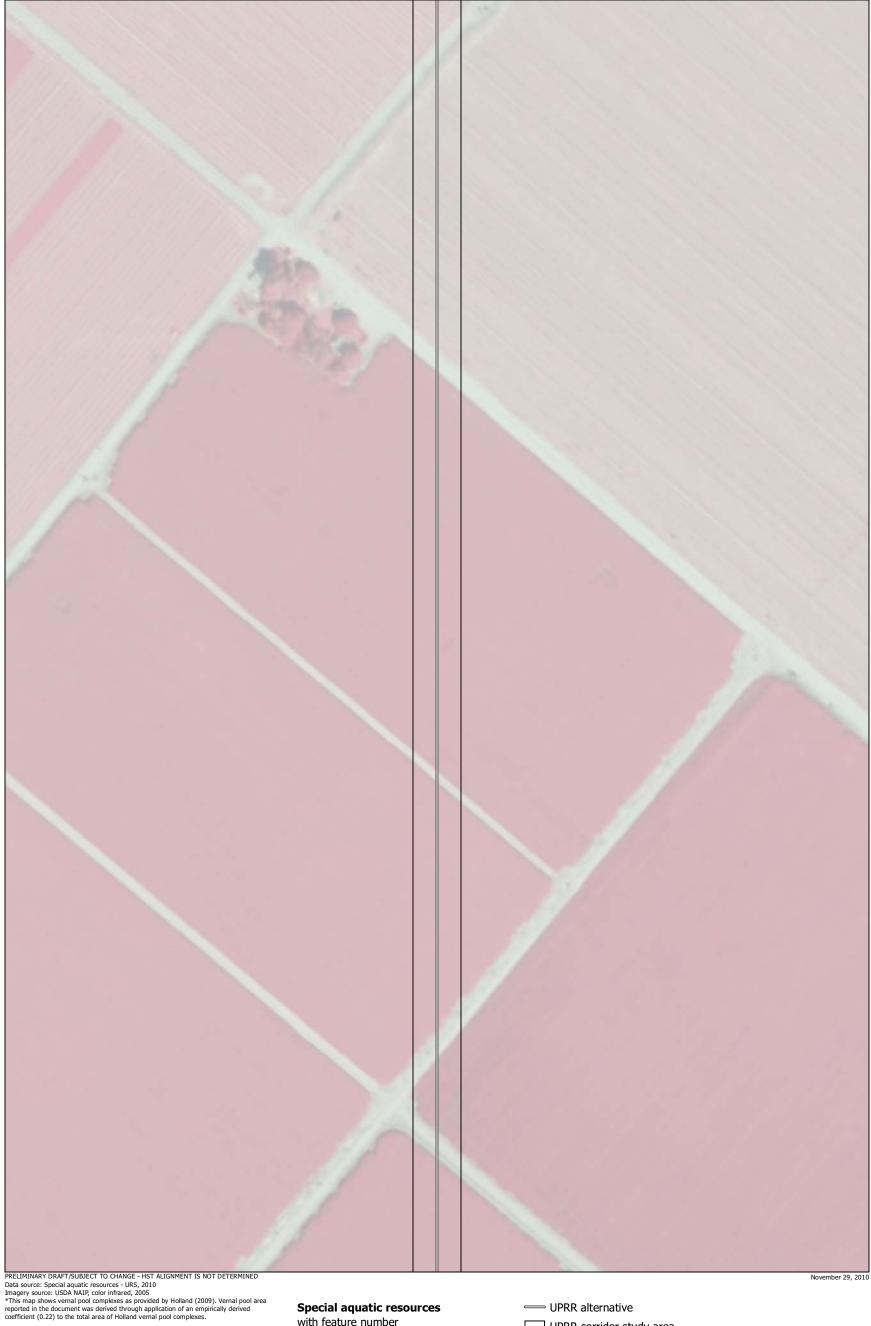
Riparian

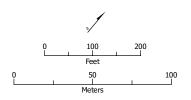
Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 91 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

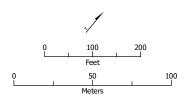
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 92 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

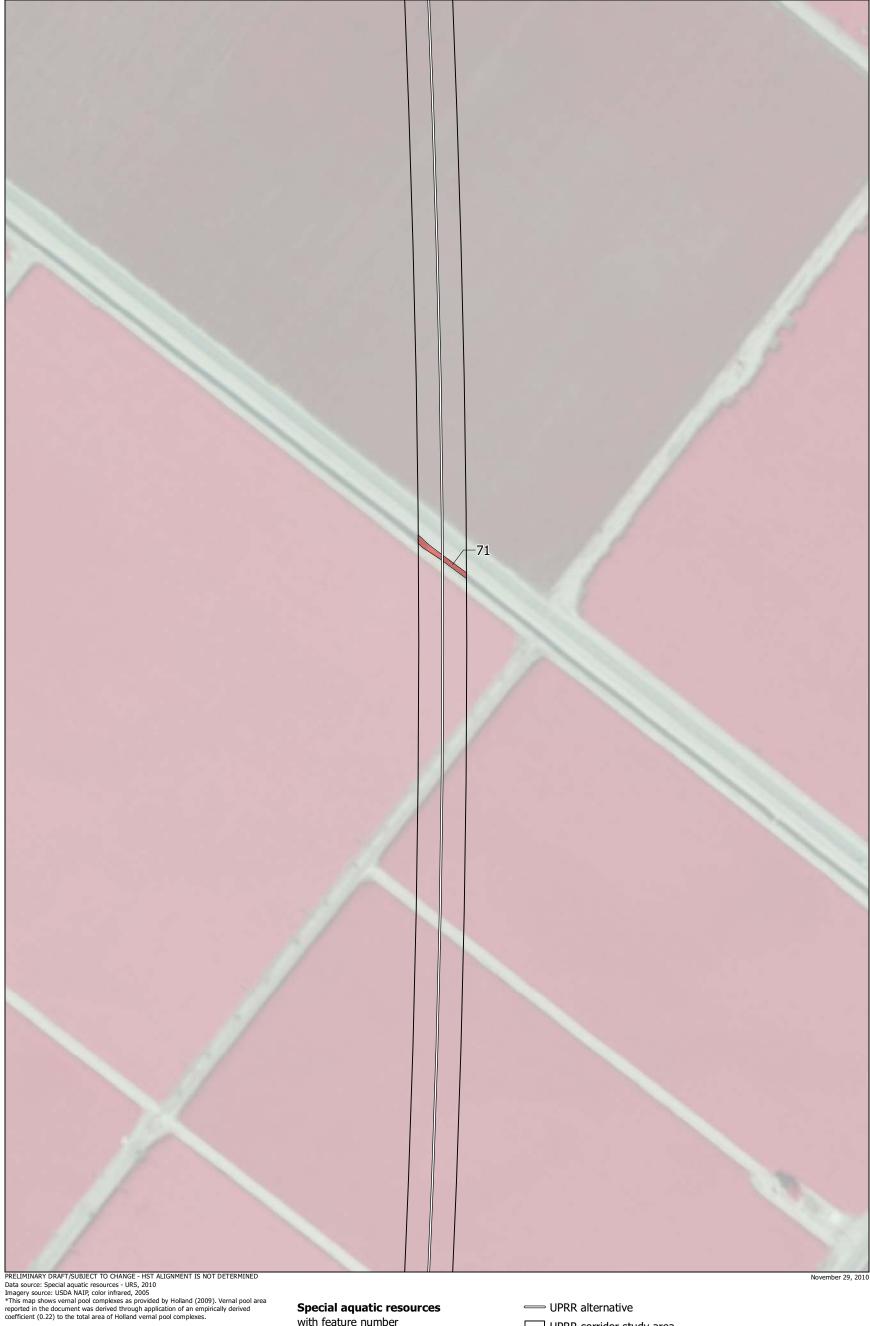
Riverine Seasonal wetland

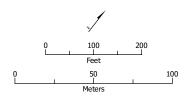
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 93 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

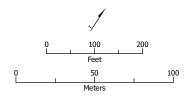
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 94 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

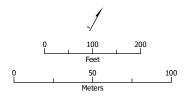
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 95 Estimated special aquatic resources located within the UPRR alternative alignment area



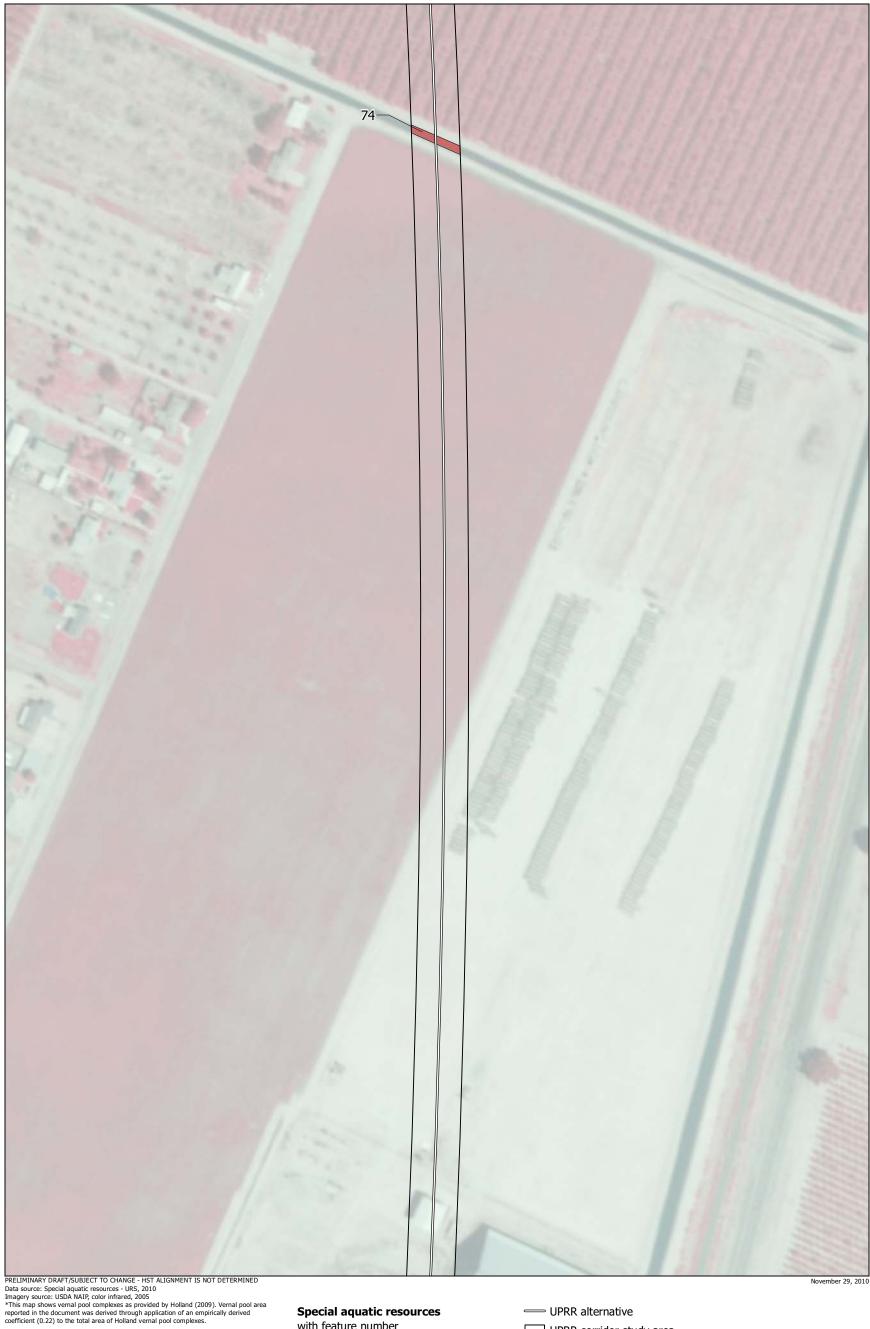


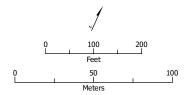
with feature number Canal/Ditch Retention/Detention basin

Riparian Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 96 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

Riverine Seasonal wetland

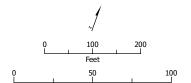
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 97 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

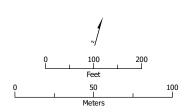
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 98 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Seasonal wetland

Riparian

Riverine

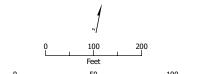
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 99 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin Riparian

Riverine Seasonal wetland

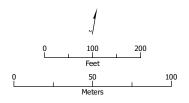
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 100 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

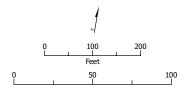
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 101 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

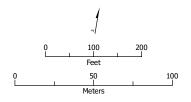
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 102 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland

Vernal pool complex (Holland, 2009)\*

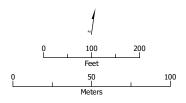
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 103 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

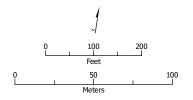
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 104 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

Riparian Riverine

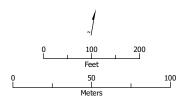
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 105 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

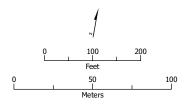
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 106 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

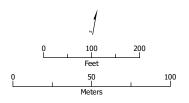
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 107 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland

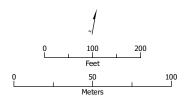
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 108 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

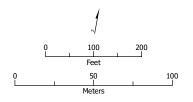
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 109 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

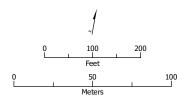
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 110 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

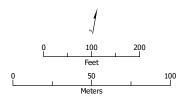
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 111 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

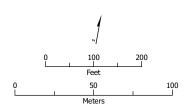
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 112 Estimated special aquatic resources located within the UPRR alternative alignment area





**Special aquatic resources** with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

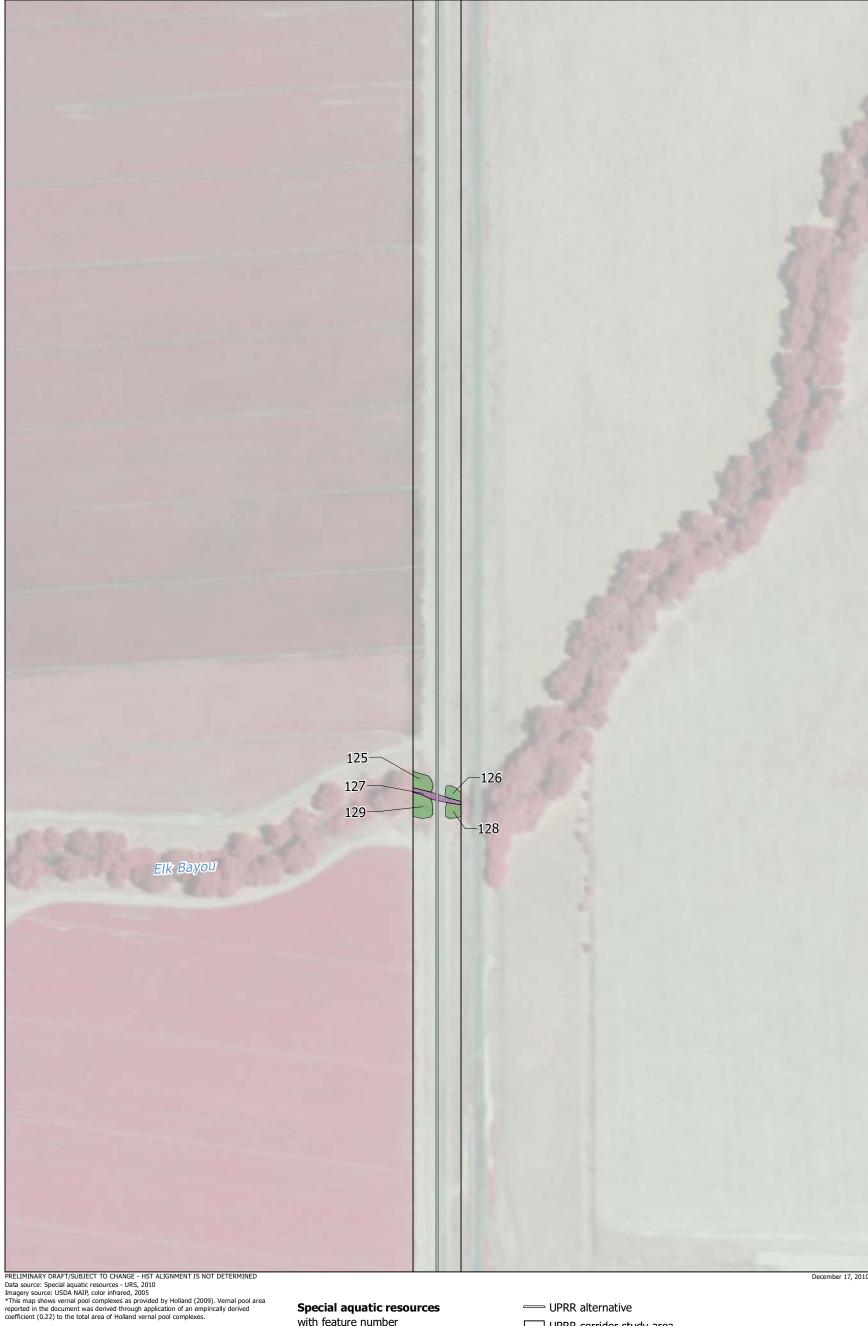
Riparian Riverine

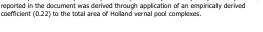
Seasonal wetland

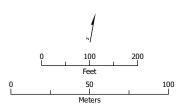
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 113 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area







with feature number Canal/Ditch

Retention/Detention basin

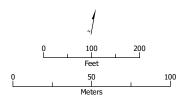
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 114 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

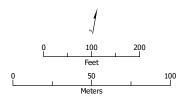
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 115 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

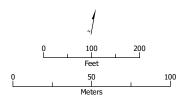
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 116 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

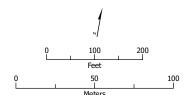
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 117 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

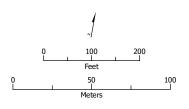
Riparian

Riverine Seasonal wetland — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 118 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

Riparian Riverine

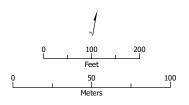
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 119 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

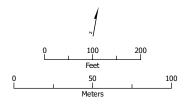
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 120 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

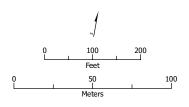
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 121 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

Riverine

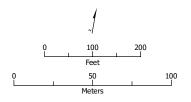
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 122 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

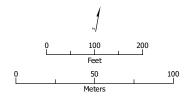
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 123 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

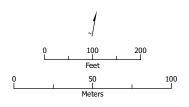
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 124 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

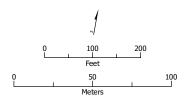
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 125 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

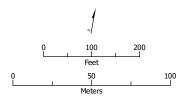
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 126 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

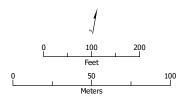
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 127 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

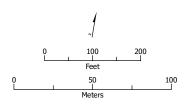
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 128 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

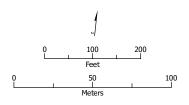
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 129 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

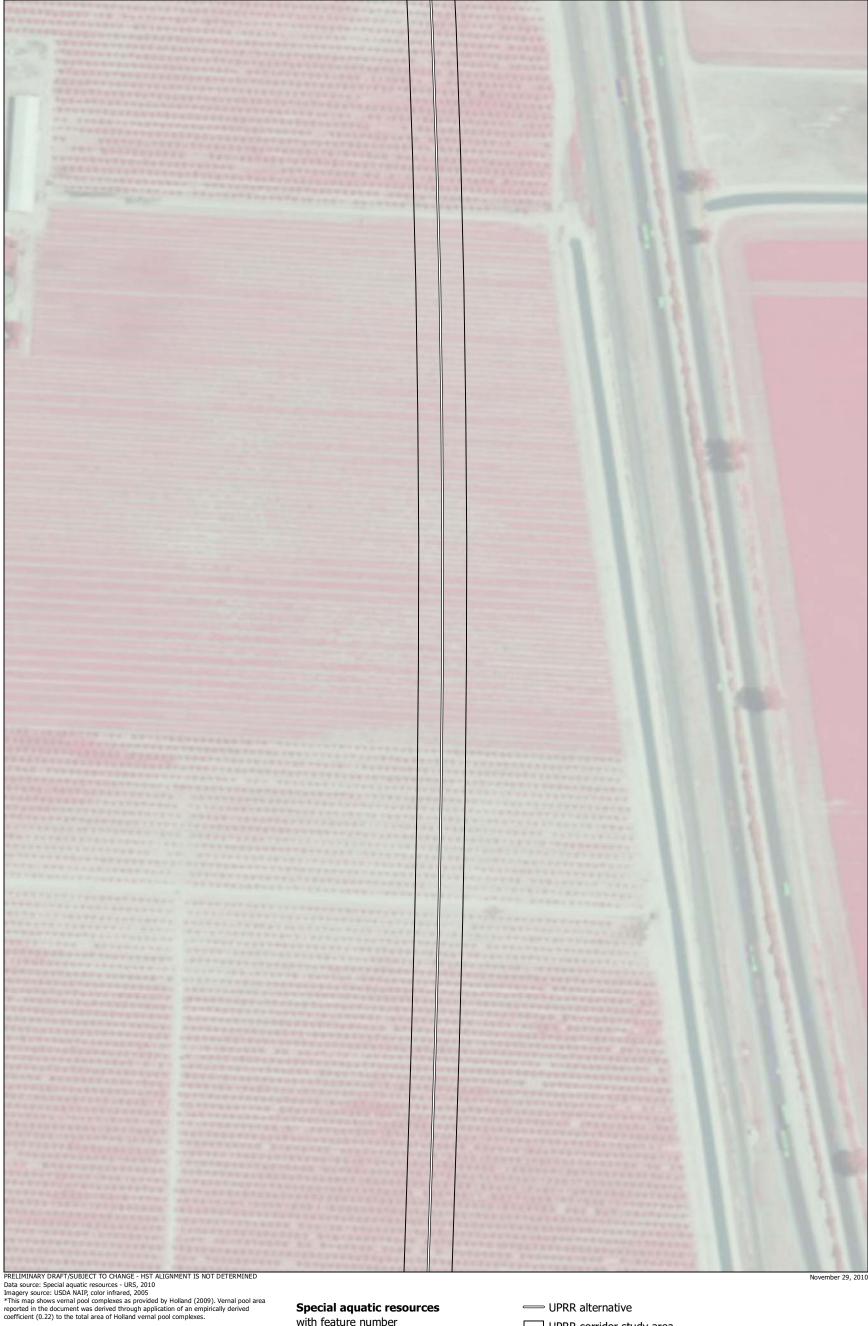
Riverine Seasonal wetland

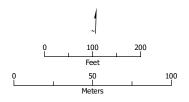
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 130 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

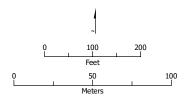
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 131 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

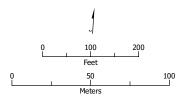
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 132 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

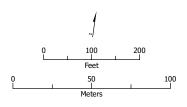
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 133 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

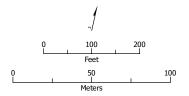
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 134 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

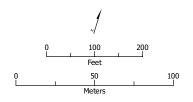
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 135 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

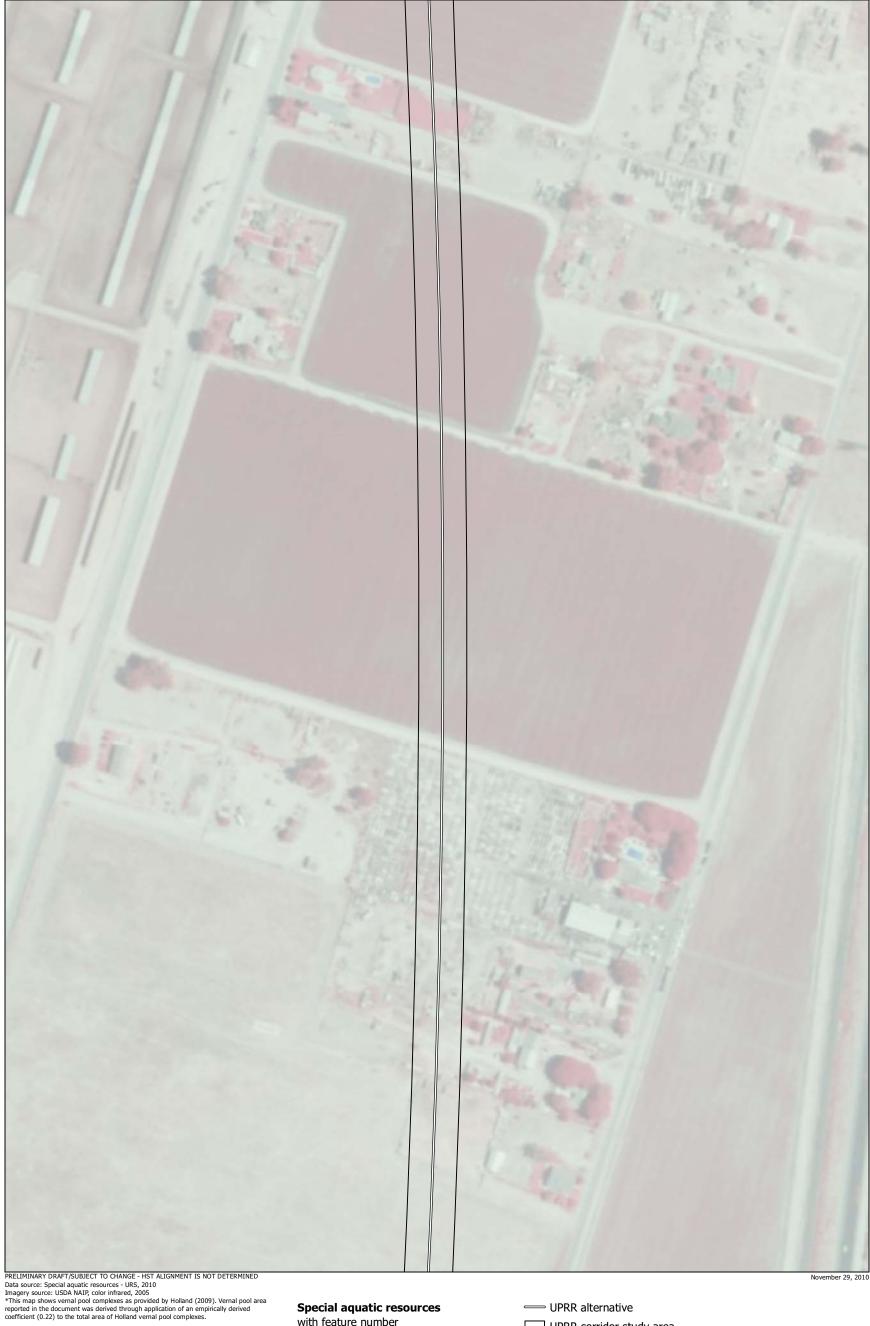
Riverine Seasonal wetland

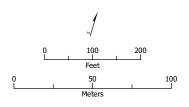
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 136 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

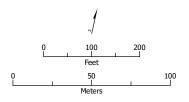
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 137 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

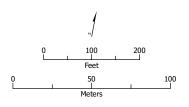
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 138 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

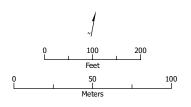
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 139 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

Riverine

Seasonal wetland

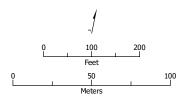
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 140 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

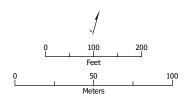
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 141 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

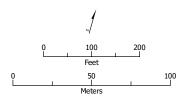
Riparian

Riverine Seasonal wetland — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 142 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

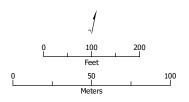
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 143 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 144 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 145 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

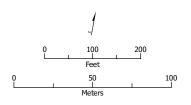
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 146 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 147 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

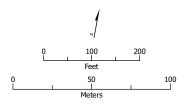
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 148 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch Retention/Detention basin

Riparian

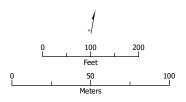
Riverine

Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 149 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

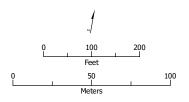
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 150 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

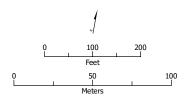
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 151 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

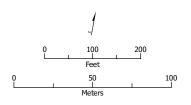
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 152 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

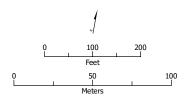
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 153 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

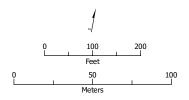
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 154 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

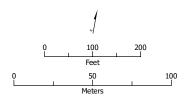
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 155 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

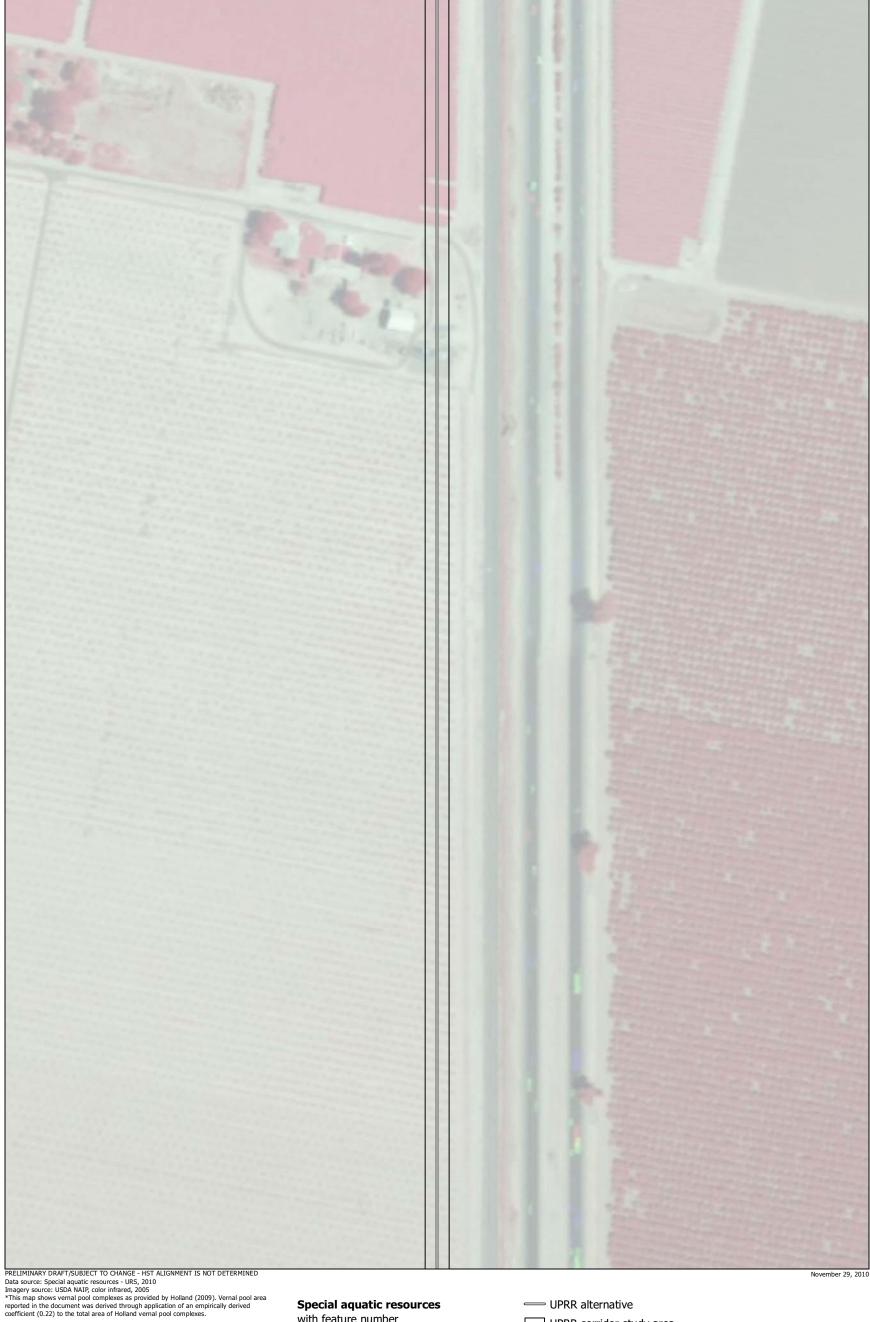
Riverine

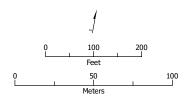
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 156 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

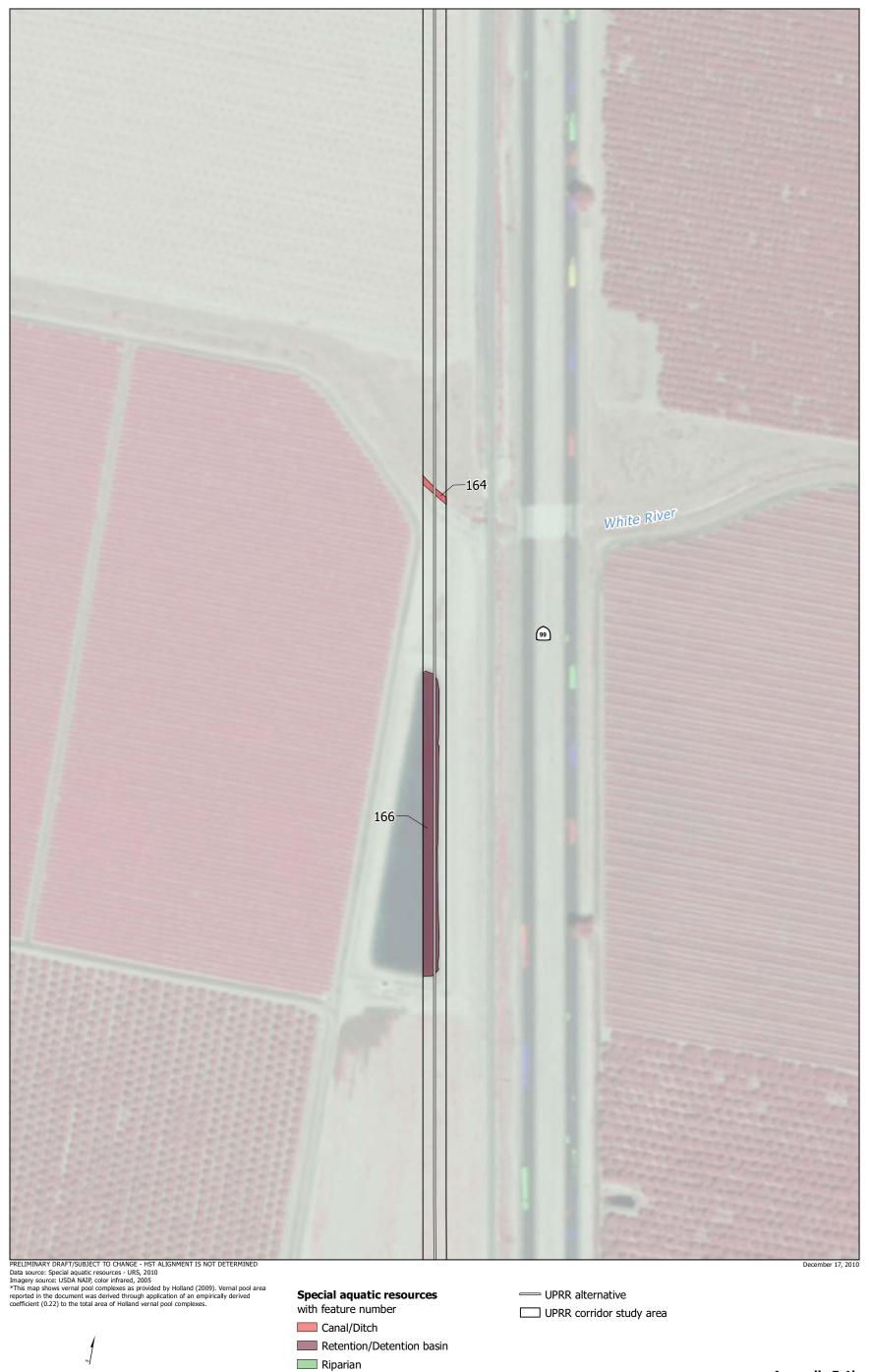
Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 157 Estimated special aquatic resources located within the UPRR alternative alignment area



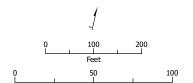
Riverine

Seasonal wetland

Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 158 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

Riverine

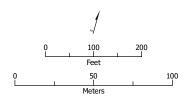
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 159 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

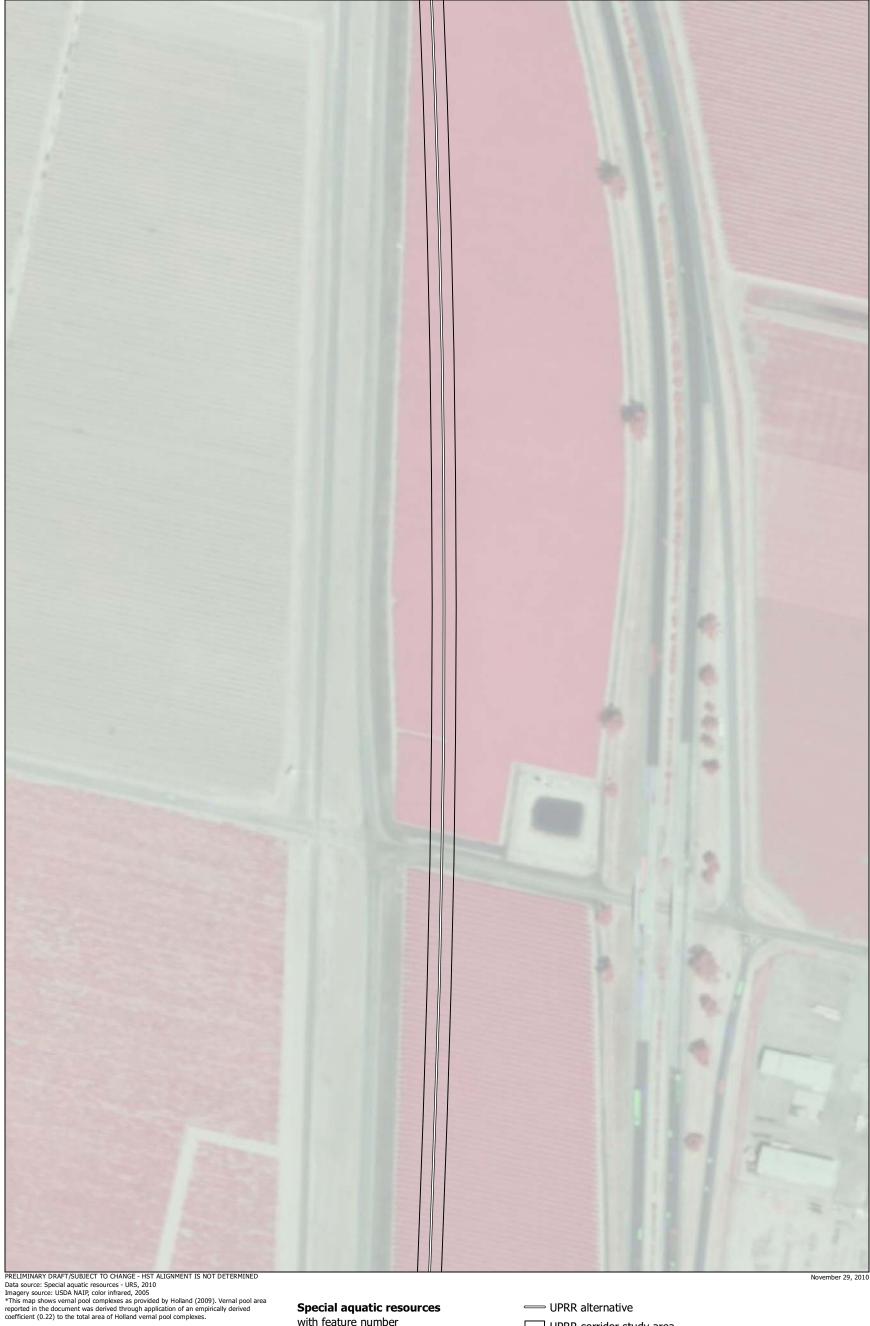
Seasonal wetland

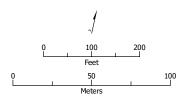
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 160 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

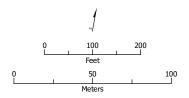
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 161 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

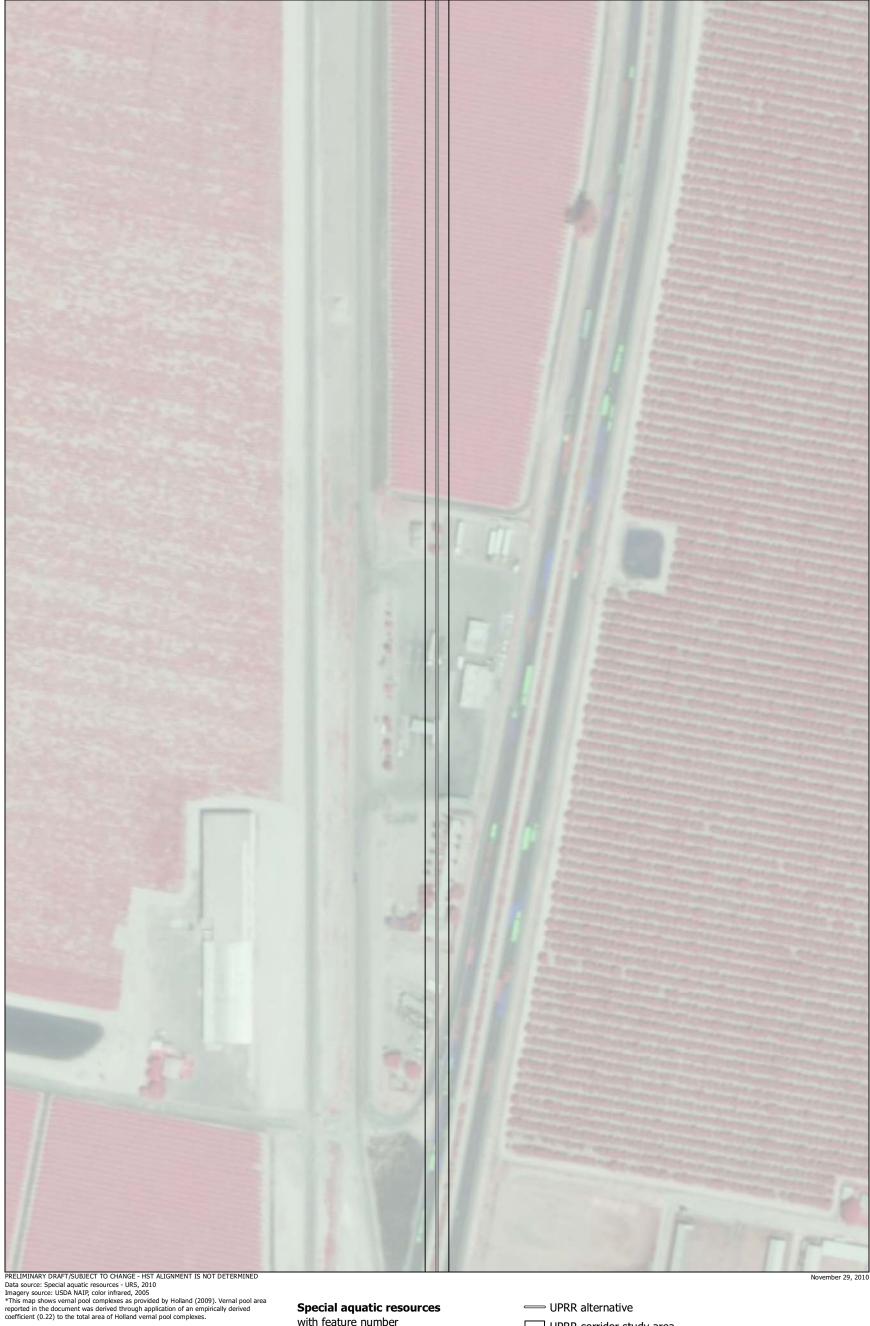
Riverine Seasonal wetland

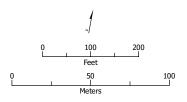
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 162 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

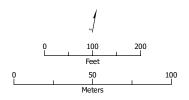
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 163 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

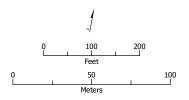
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 164 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

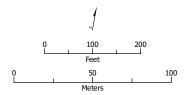
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 165 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch Retention/Detention basin

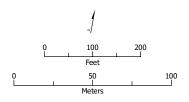
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 166 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin Riparian

Riverine

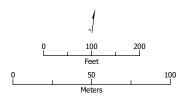
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 167 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



## **Special aquatic resources**

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

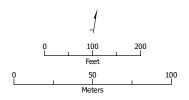
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 168 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

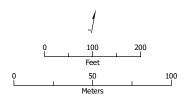
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 169 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

Riparian Riverine

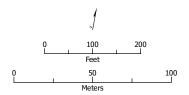
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 170 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

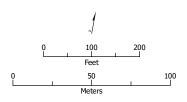
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 171 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

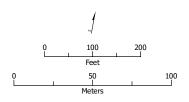
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 172 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

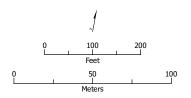
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 173 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

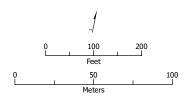
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 174 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



## **Special aquatic resources**

with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

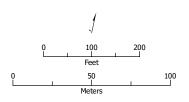
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 175 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Seasonal wetland

Riparian

Riverine

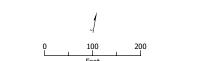
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 176 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

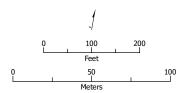
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 177 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

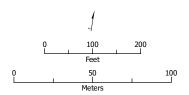
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 178 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

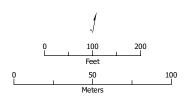
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 179 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

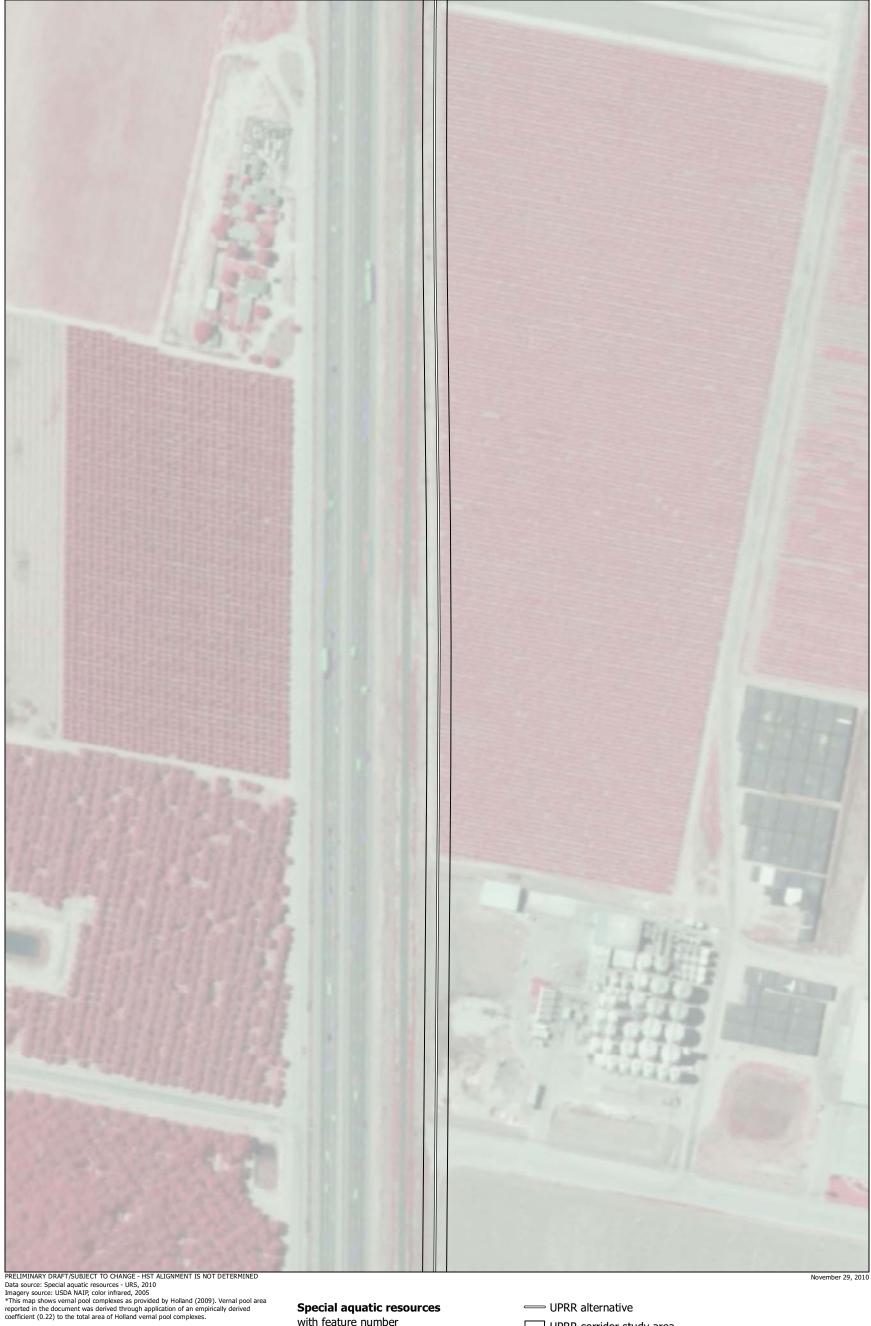
Riverine Seasonal wetland

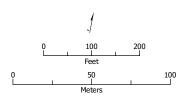
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 180 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

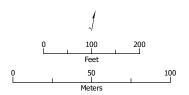
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 181 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

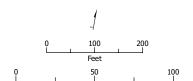
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 182 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

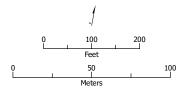
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 183 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

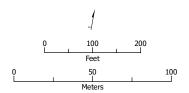
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 184 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

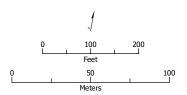
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 185 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

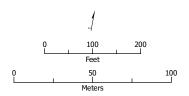
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 186 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

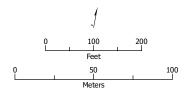
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 187 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

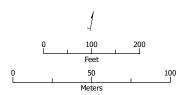
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 188 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

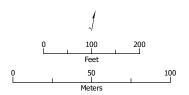
Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 189 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

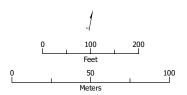
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 190 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

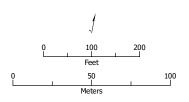
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 191 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

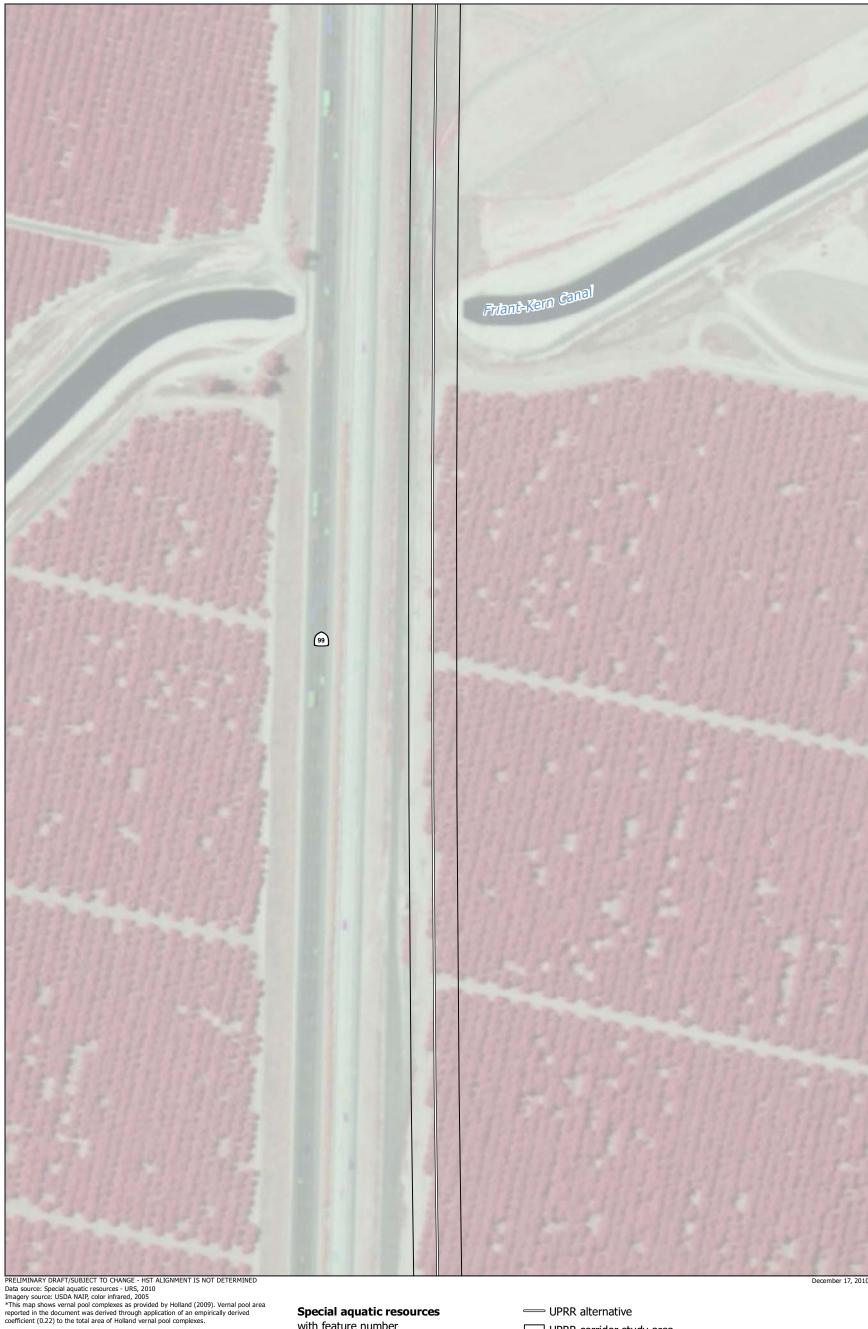
Riverine Seasonal wetland

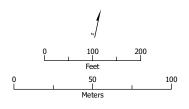
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 192 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland

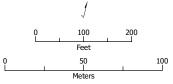
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 193 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

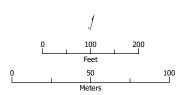
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 194 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

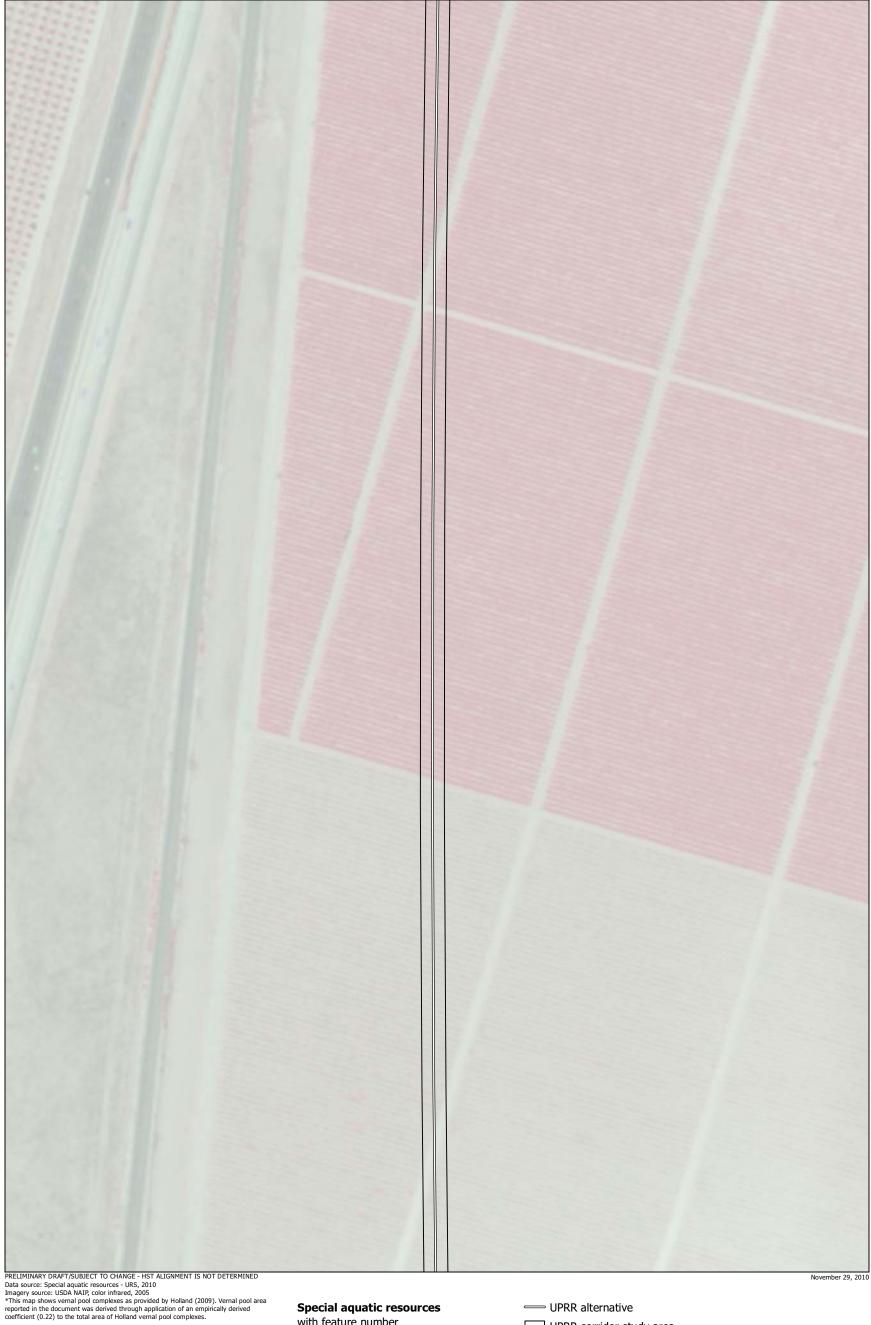
Riverine Seasonal wetland

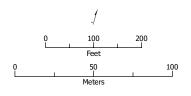
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 195 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

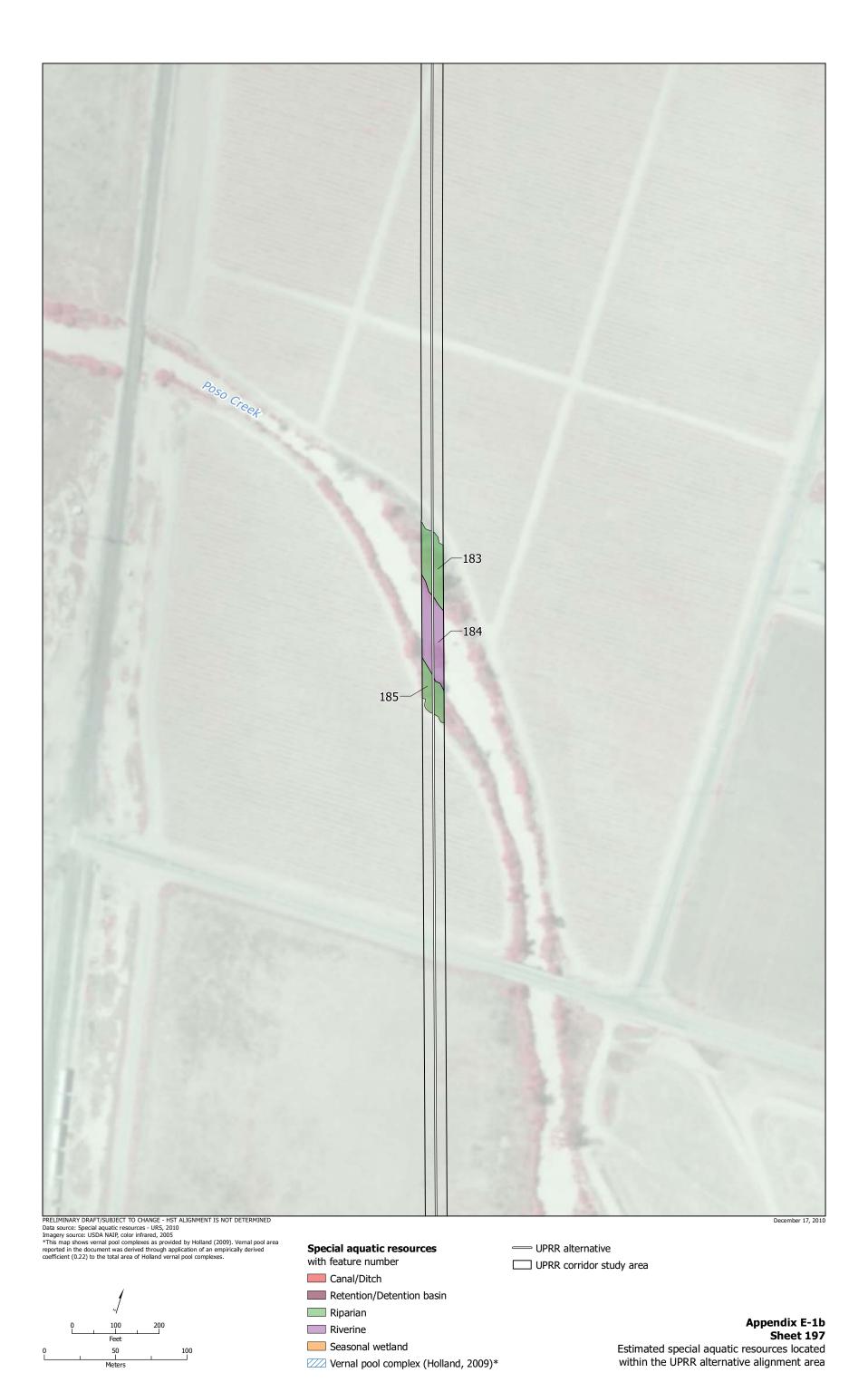
Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

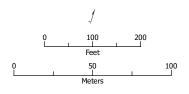
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 196 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

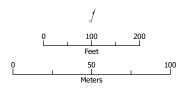
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 198 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 199 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

Seasonal wetland

Riparian

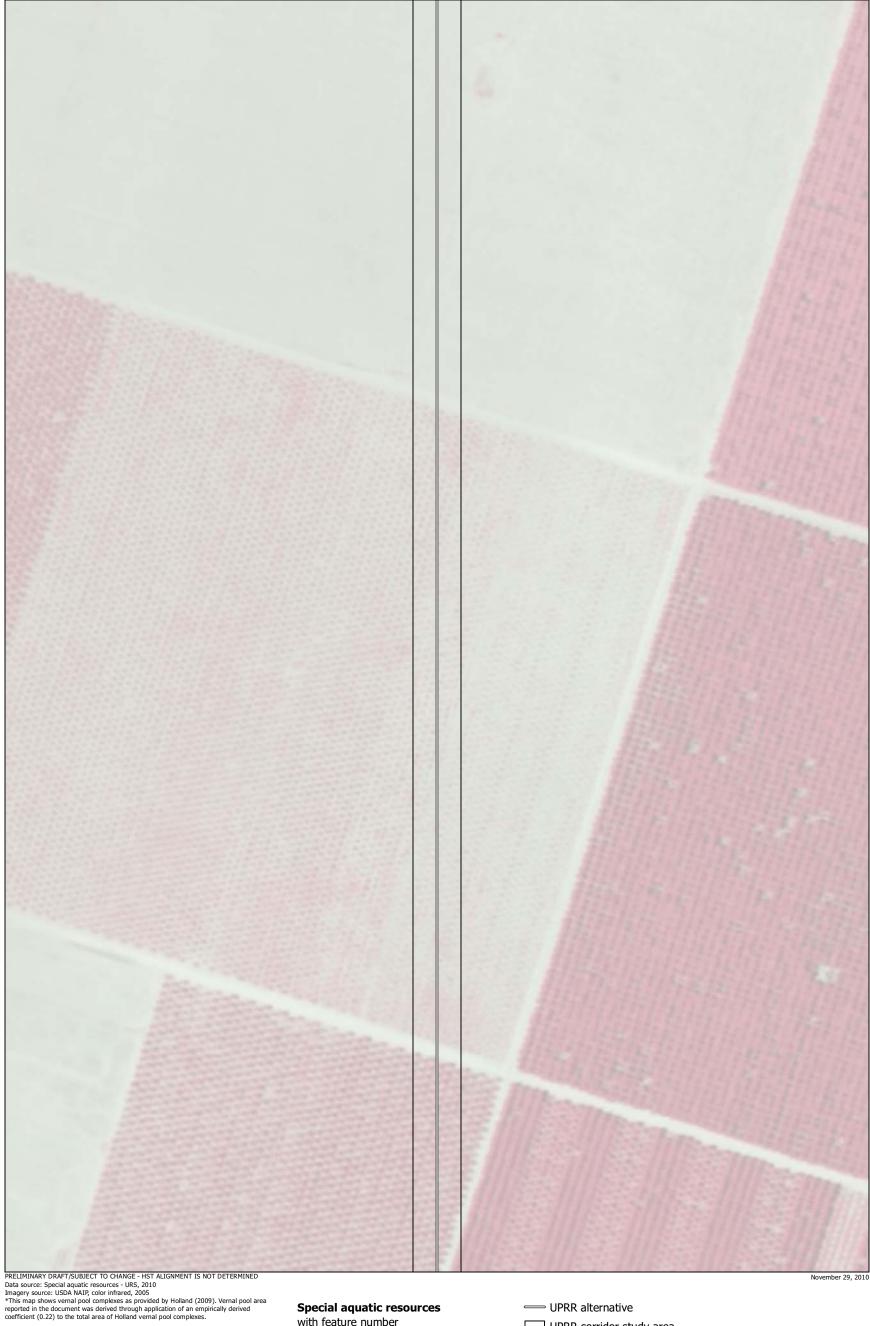
Riverine

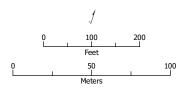
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 200 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

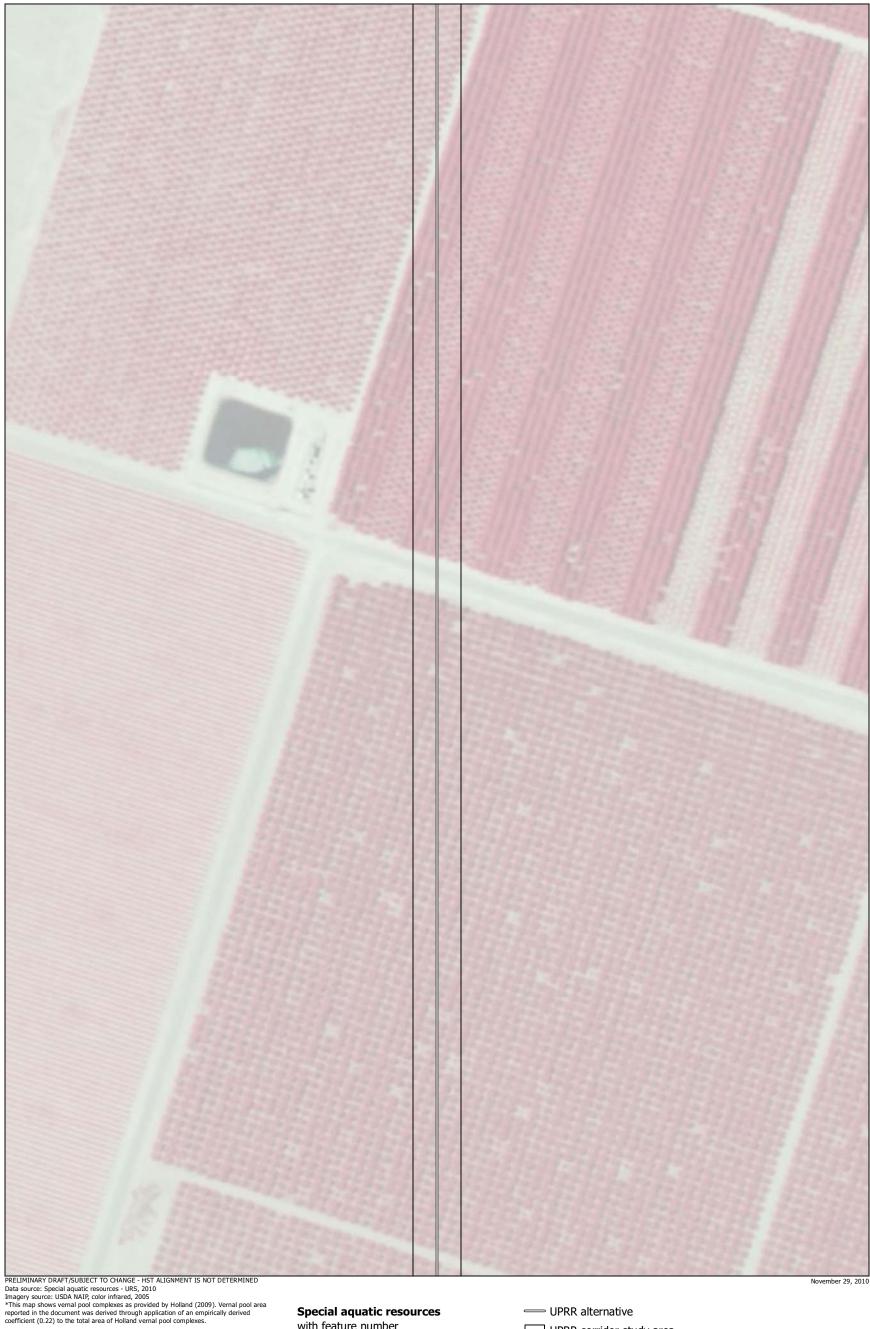
Riverine Seasonal wetland

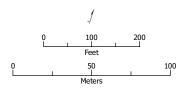
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 201 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

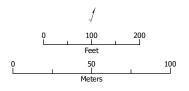
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 202 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

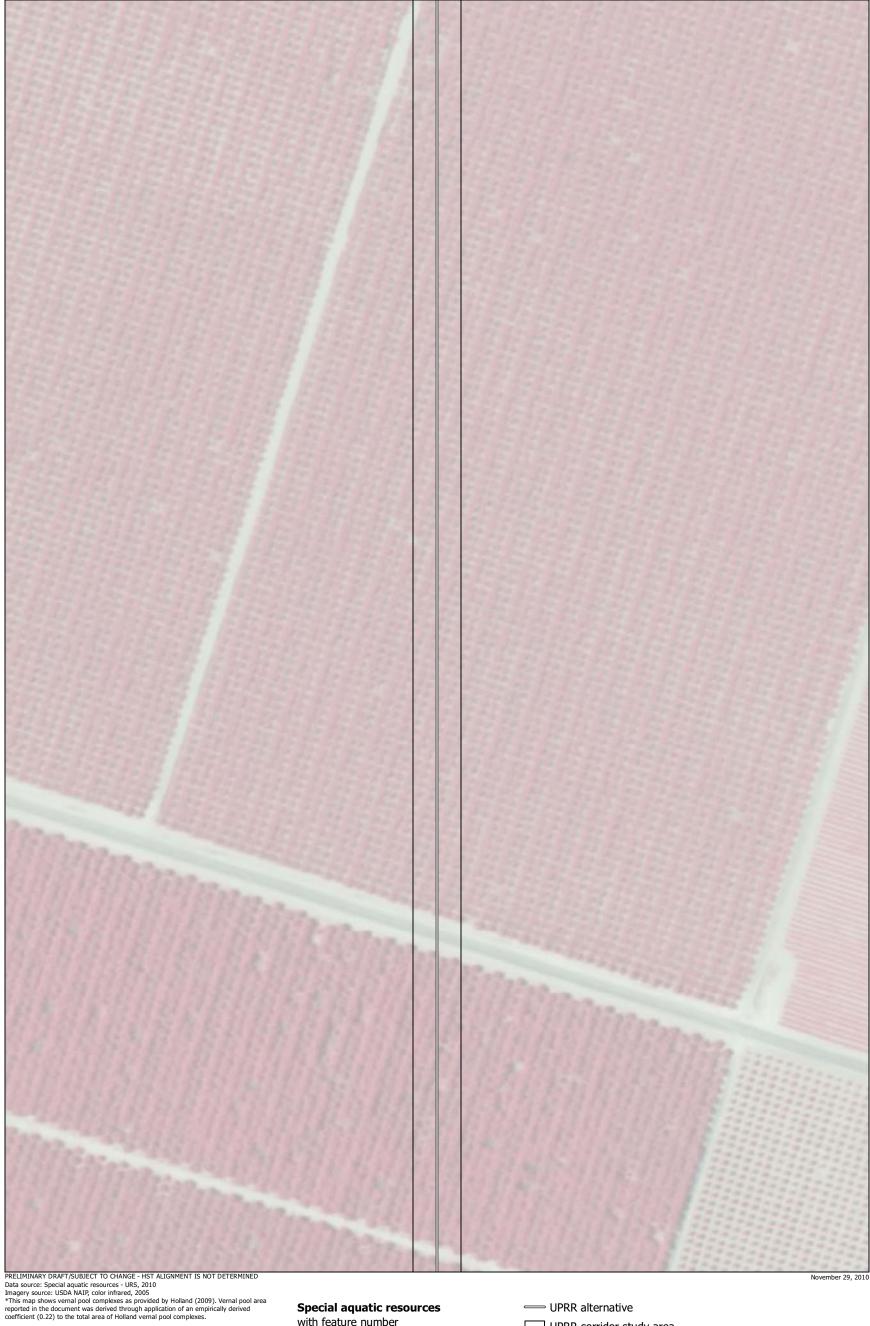
Riparian Riverine

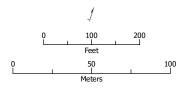
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 203 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

Riparian Riverine

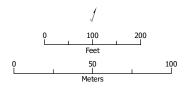
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 204 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

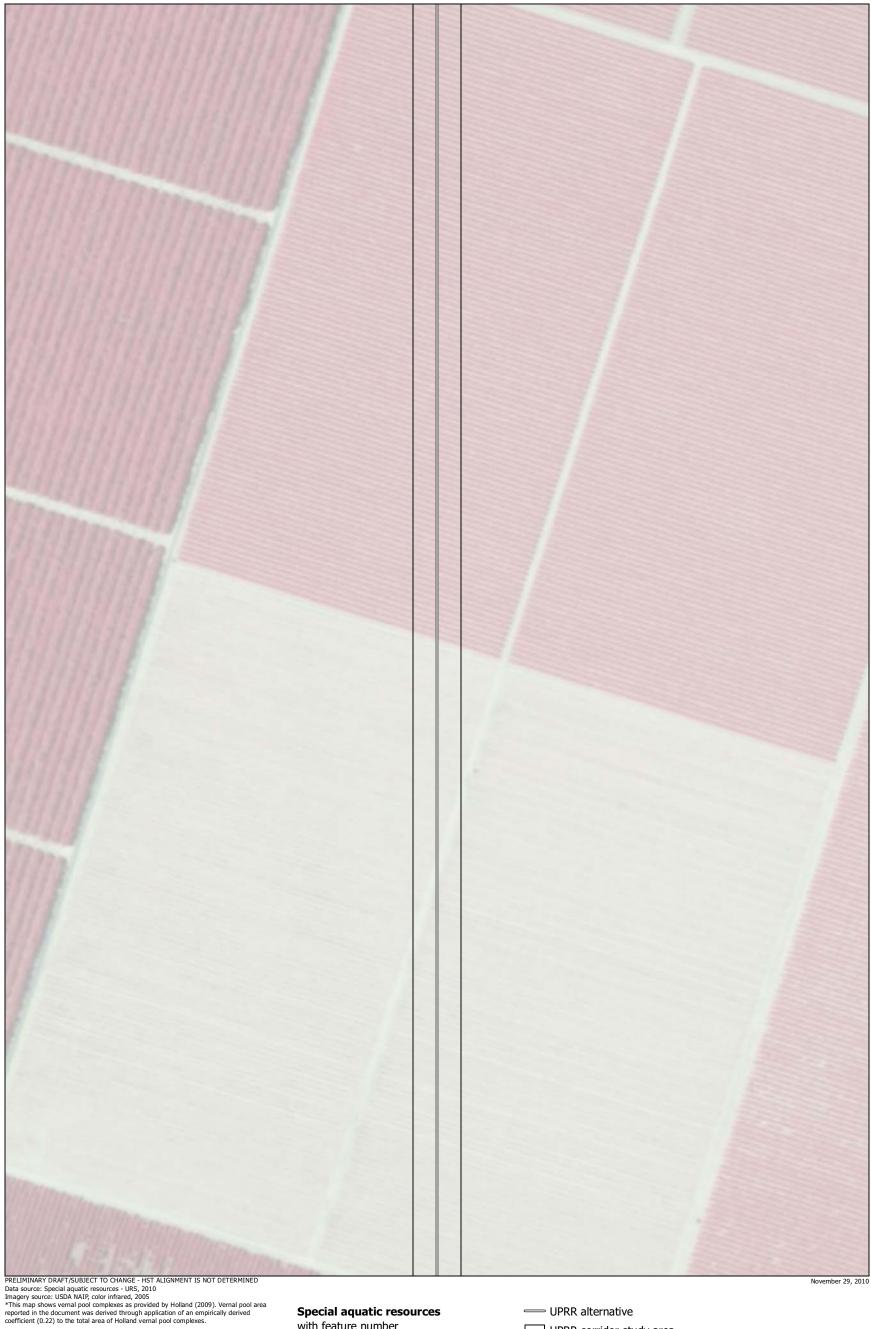
Retention/Detention basin Riparian

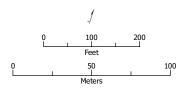
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 205 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

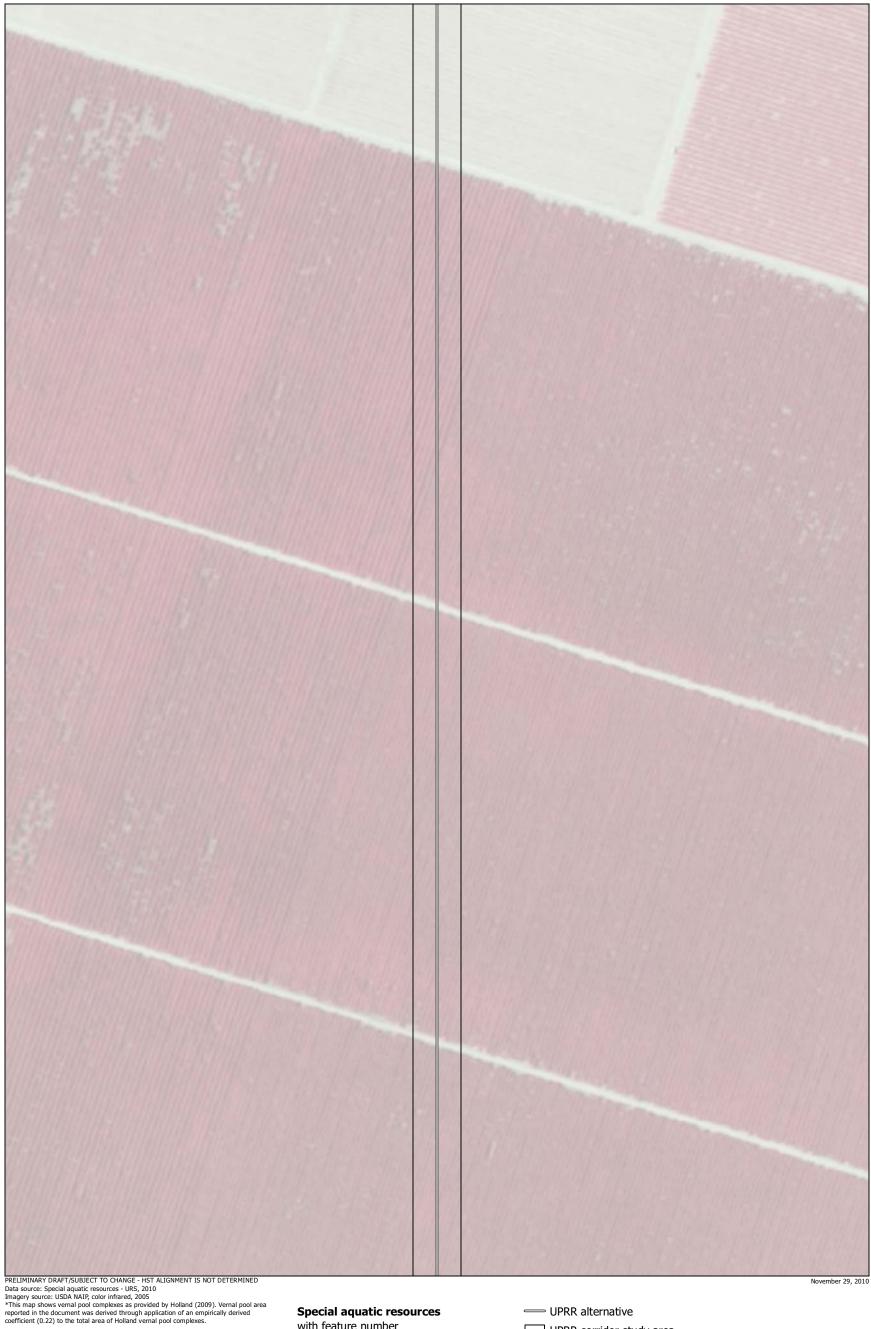
Retention/Detention basin

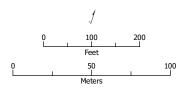
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 206 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

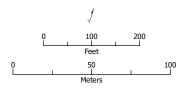
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 207 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

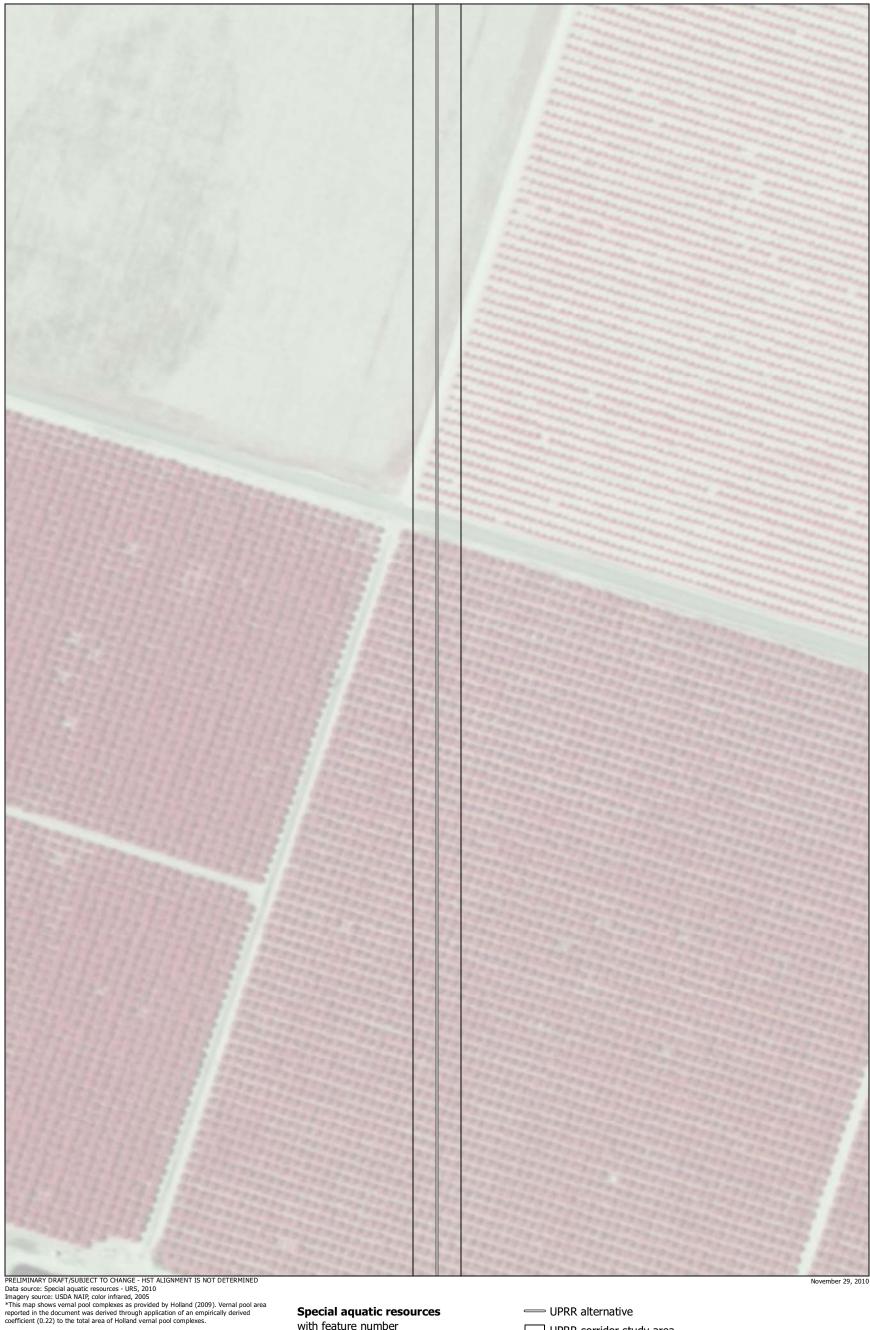
Riparian

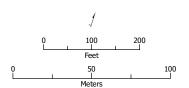
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 208 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

Retention/Detention basin

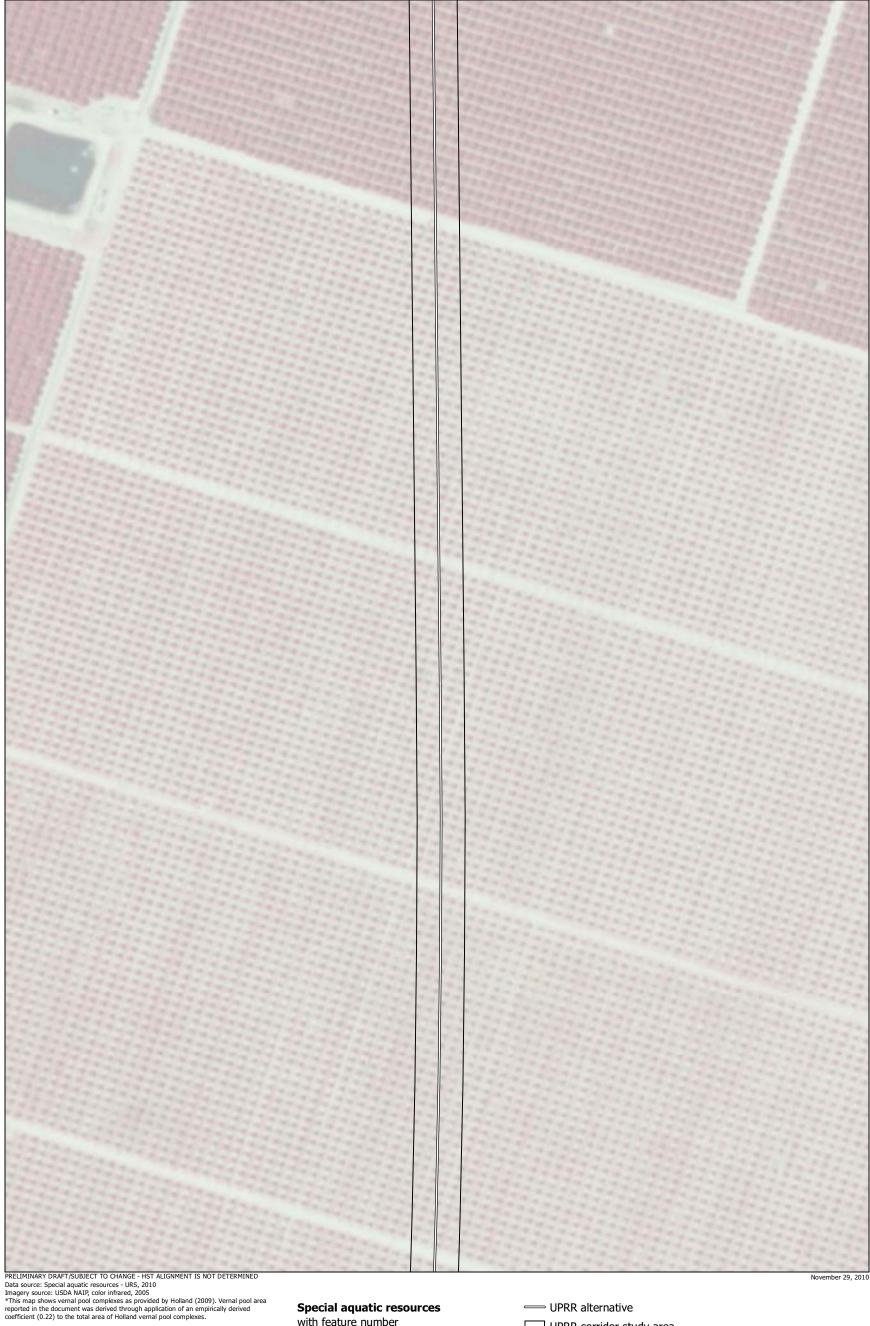
Riparian

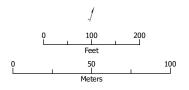
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 209 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number Canal/Ditch

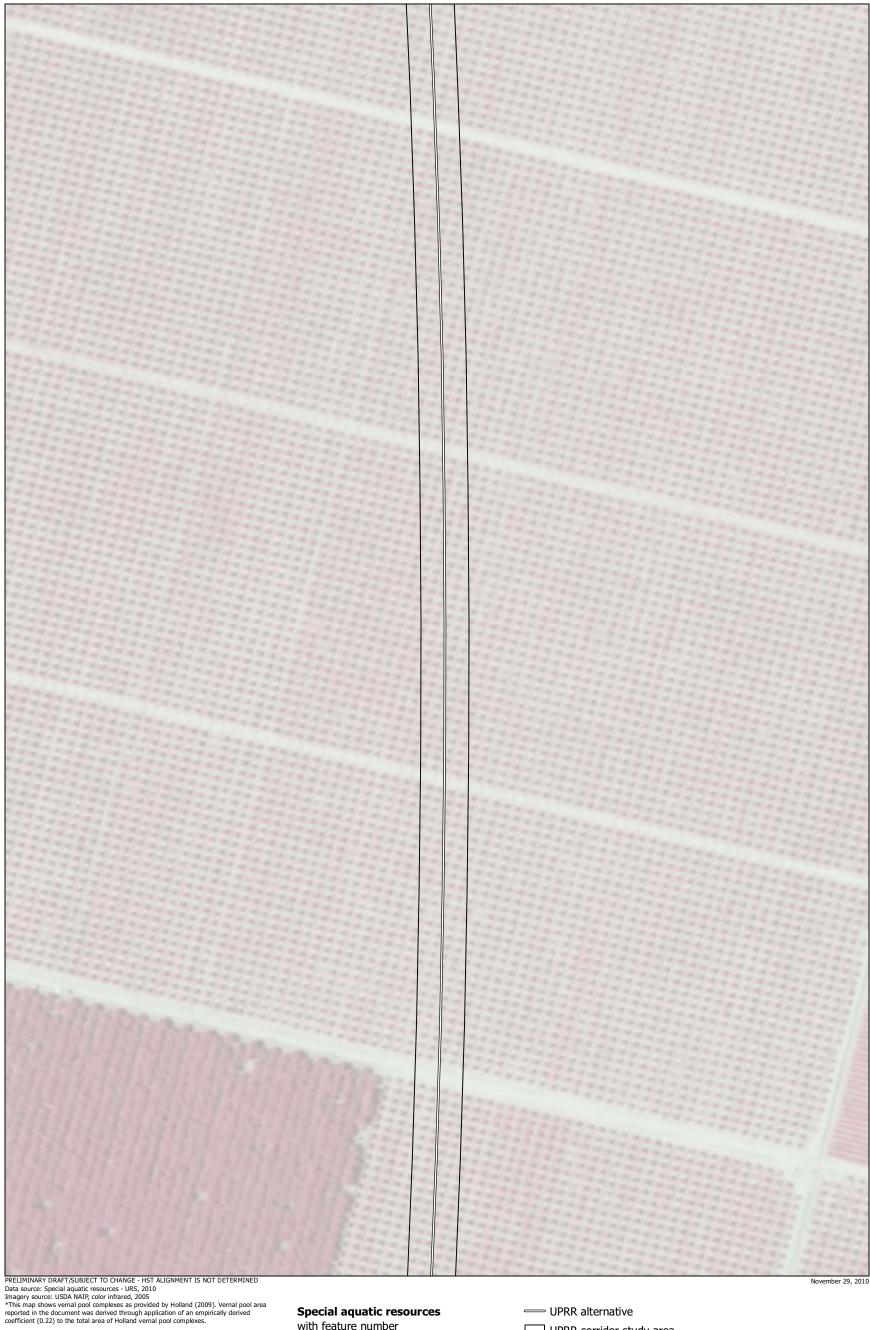
Retention/Detention basin

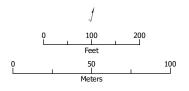
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 210 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

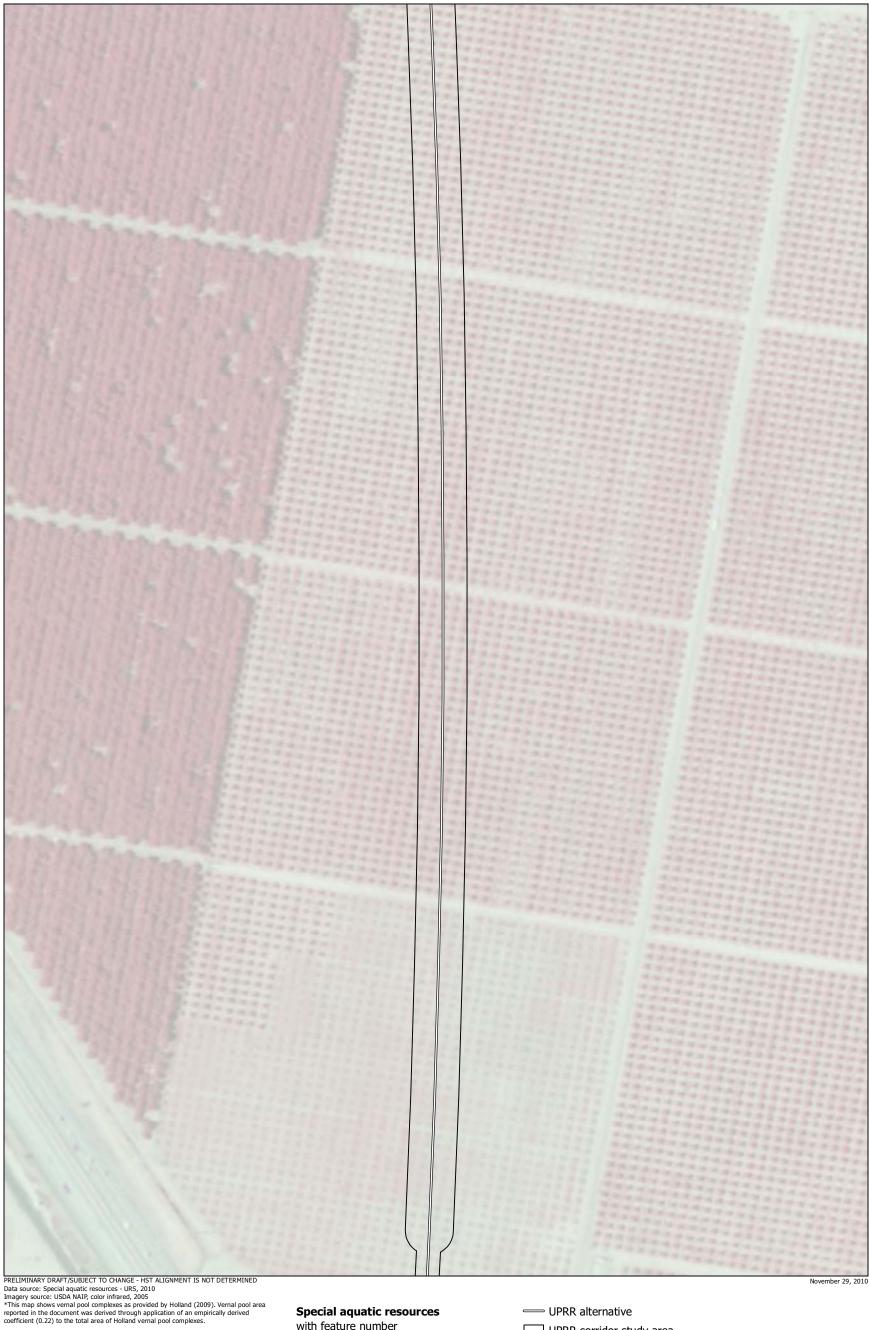
Riverine Seasonal wetland

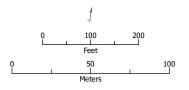
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 211 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

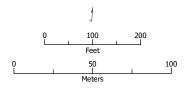
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 212 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

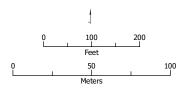
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 213 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

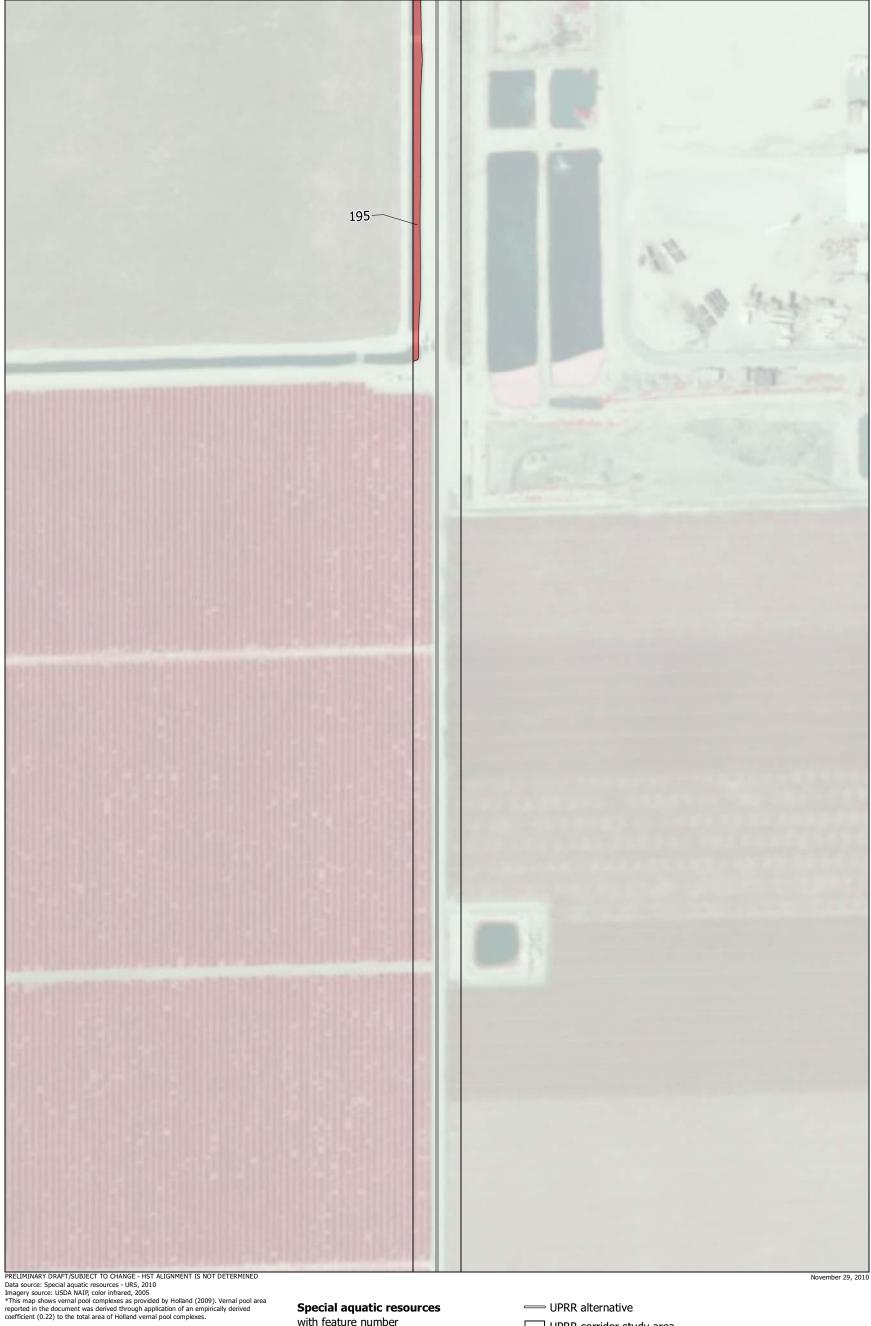
Vernal pool complex (Holland, 2009)\*

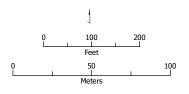
Riparian

Riverine Seasonal wetland — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 214 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch Retention/Detention basin

Riparian

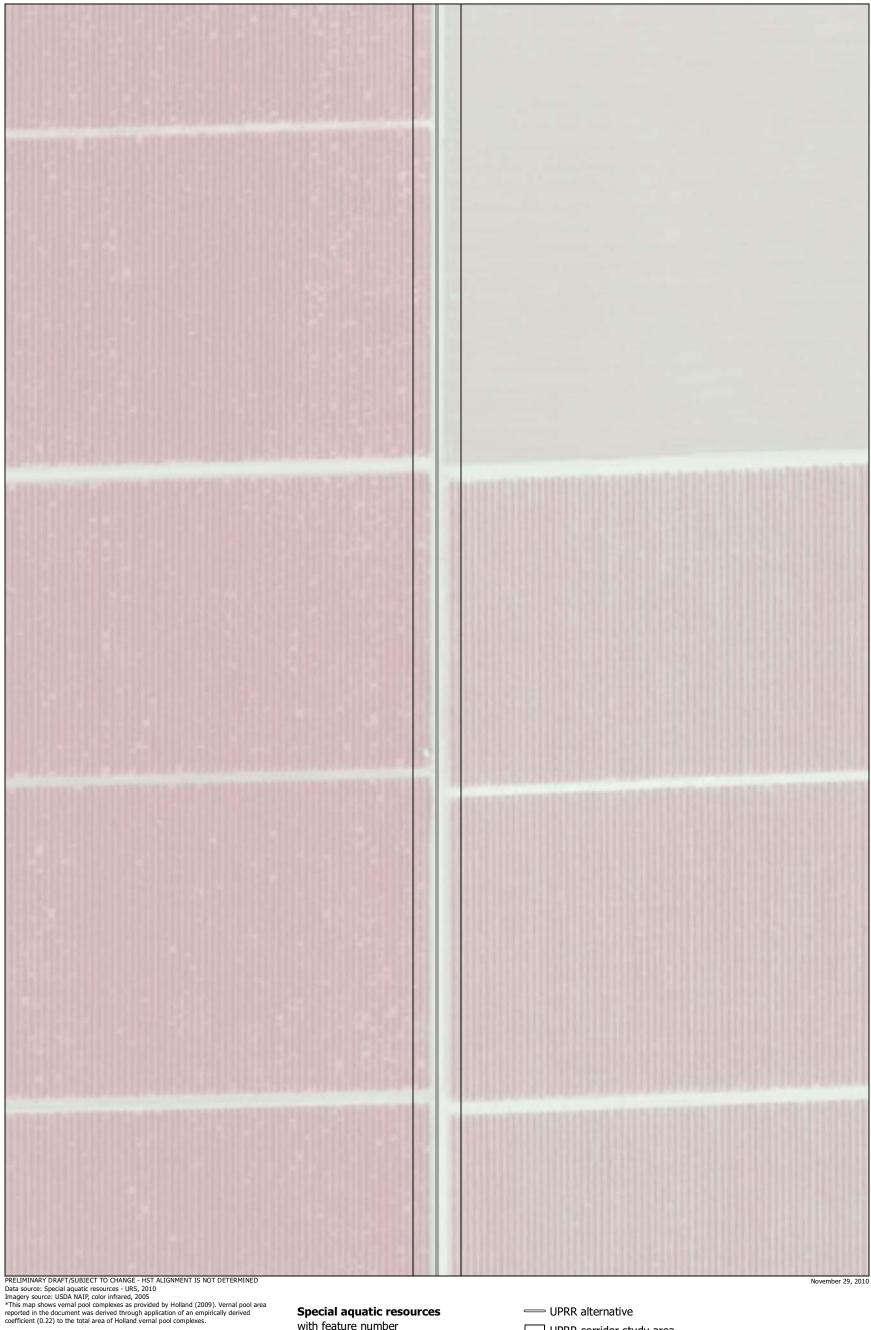
Riverine

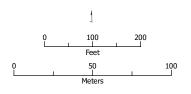
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 215 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Vernal pool complex (Holland, 2009)\*

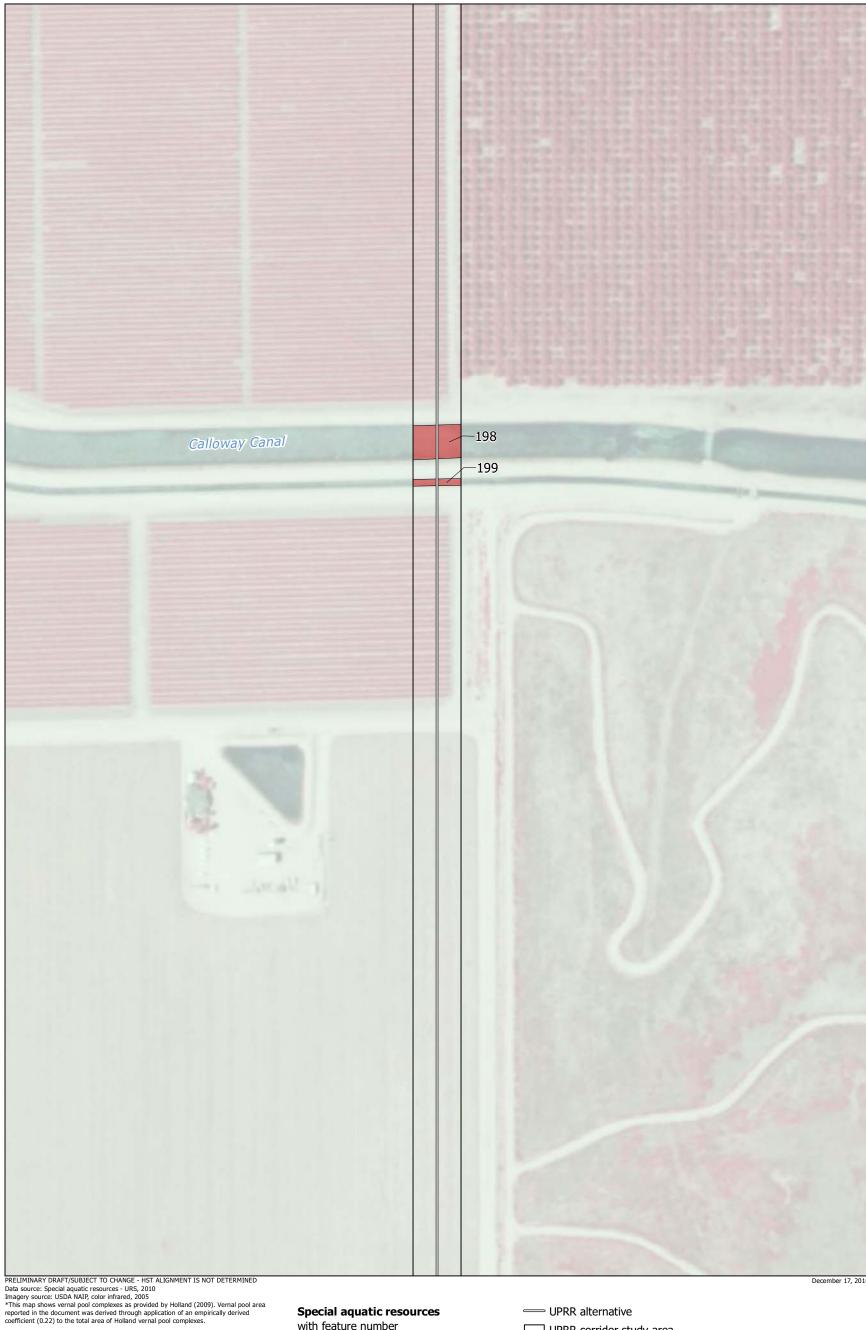
Riparian

Riverine Seasonal wetland — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 216 Estimated special aquatic resources located within the UPRR alternative alignment area





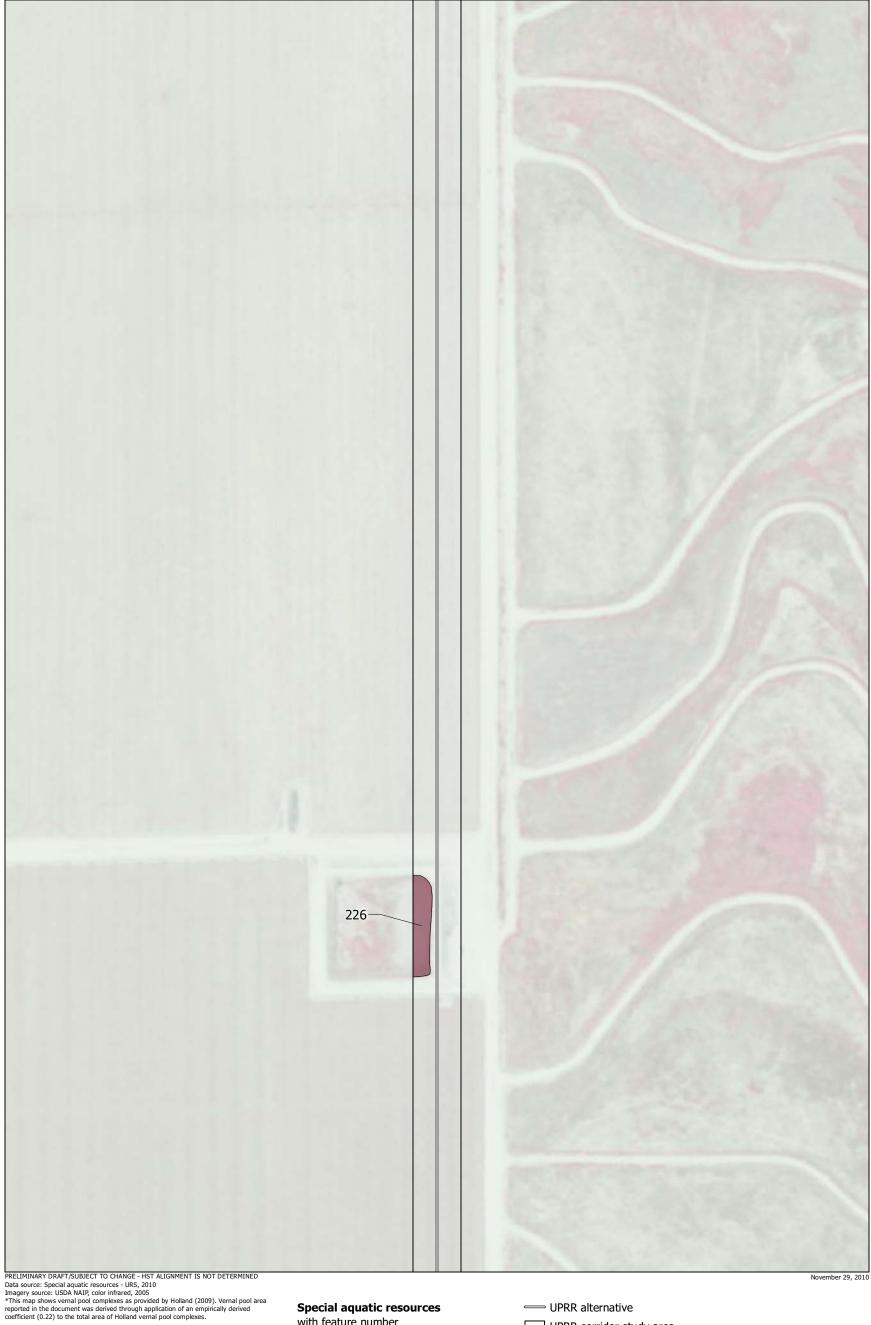
with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 218 Estimated special aquatic resources located within the  $\dot{\text{UPRR}}$  alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 219 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin Riparian

Riverine

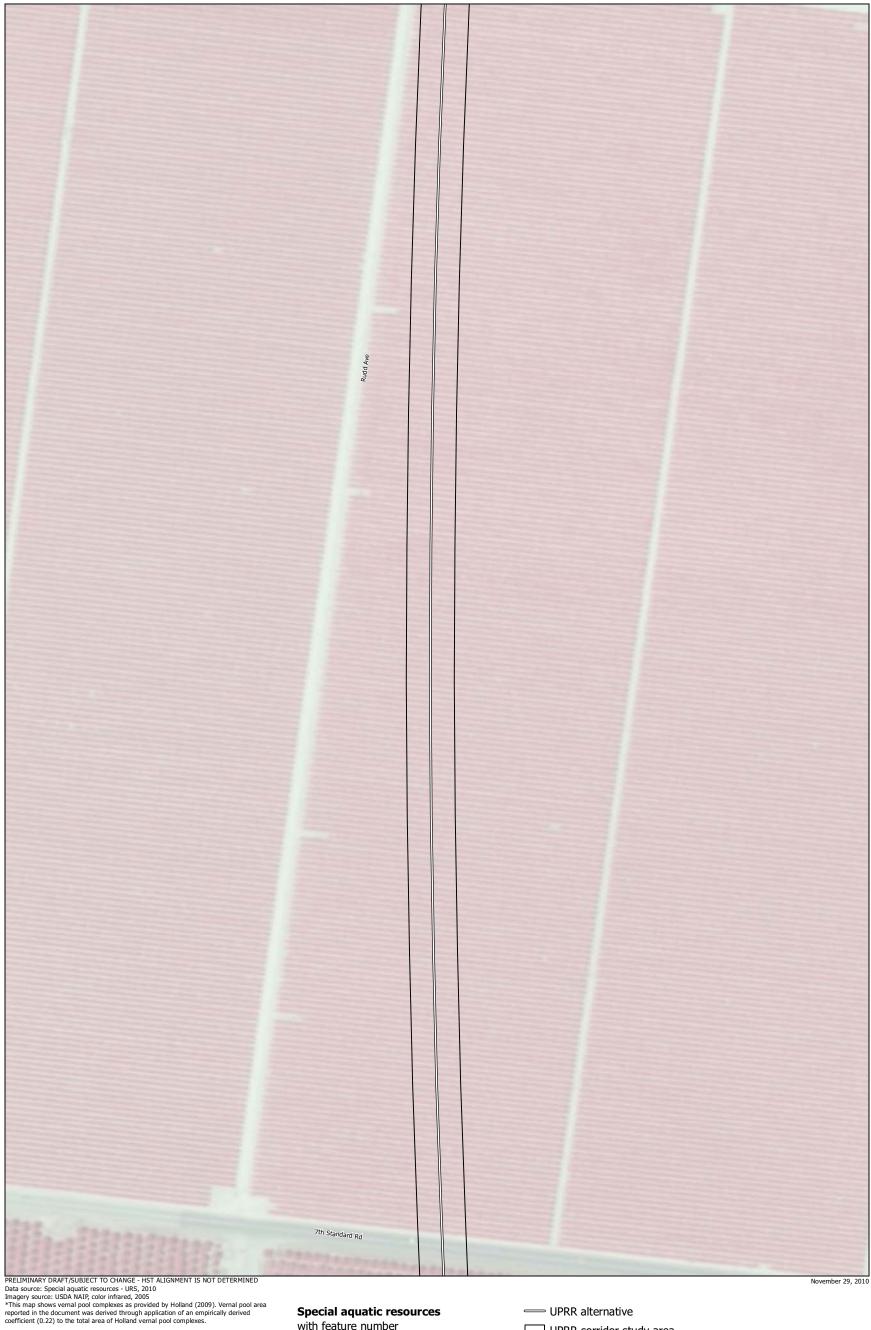
Vernal pool complex (Holland, 2009)\*

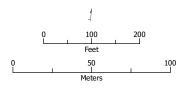
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 220 Estimated special aquatic resources located within the UPRR alternative alignment area







with feature number

Canal/Ditch

Retention/Detention basin

Riparian

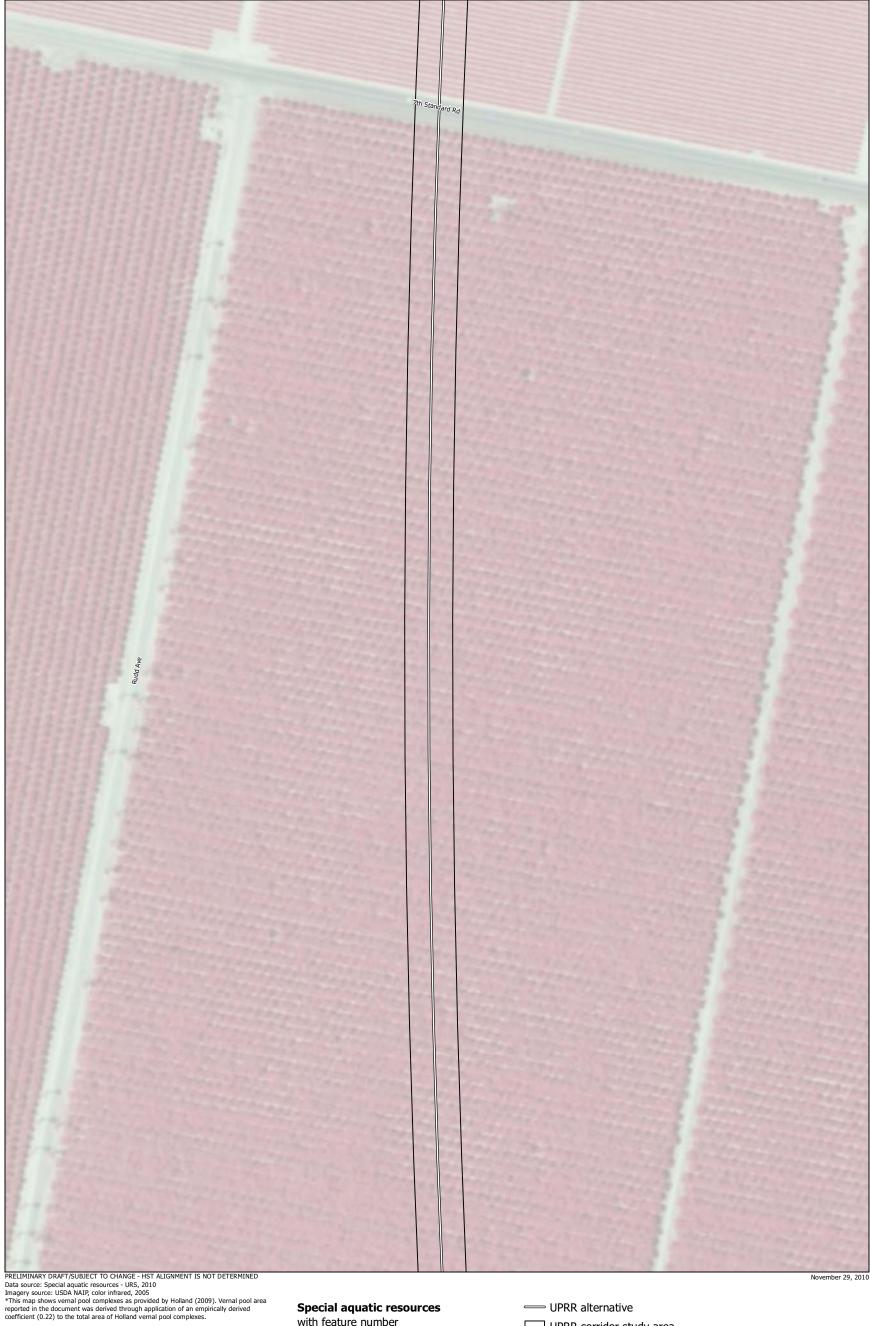
Riverine Seasonal wetland

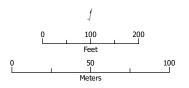
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 222 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

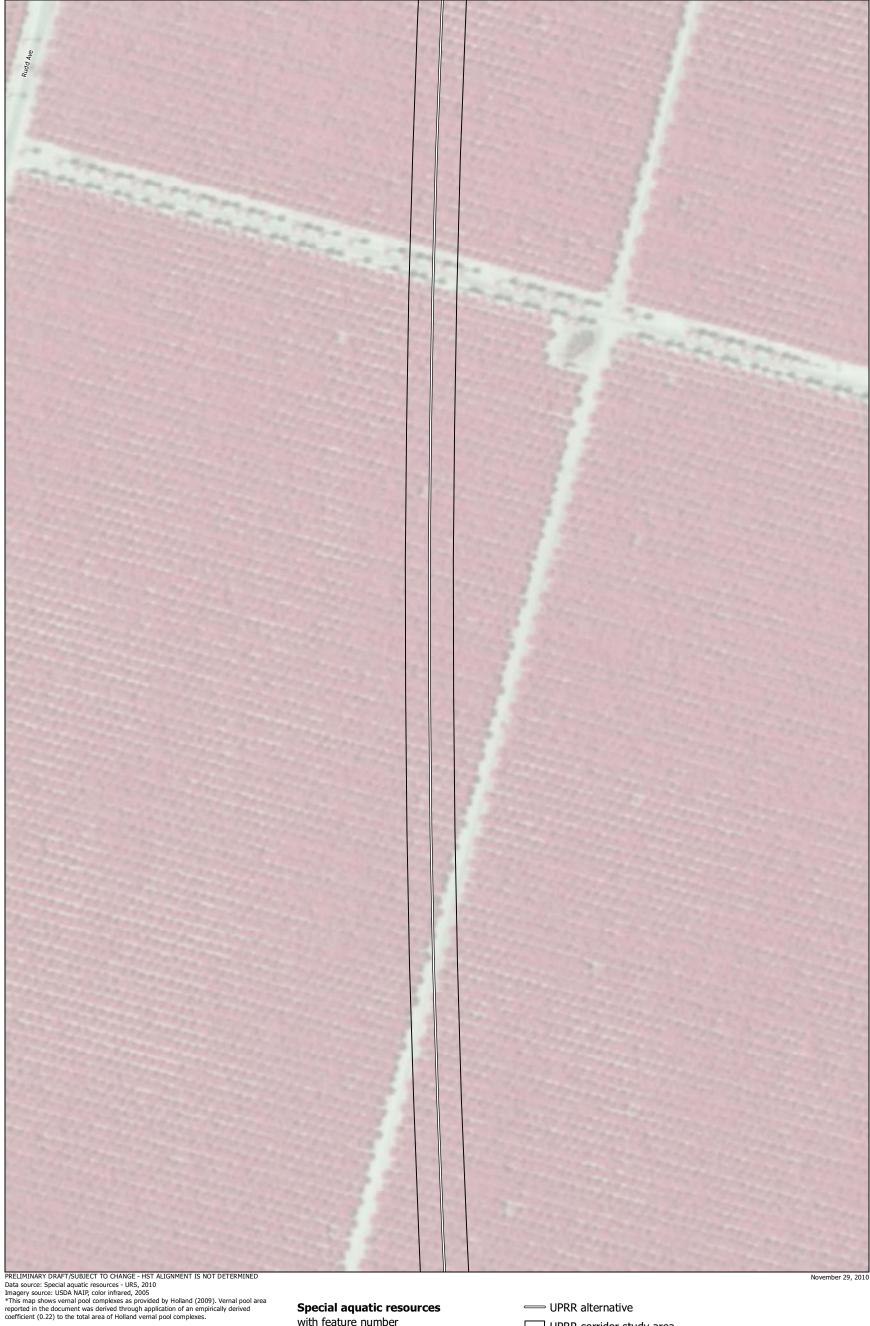
Riverine Seasonal wetland

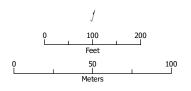
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 223 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

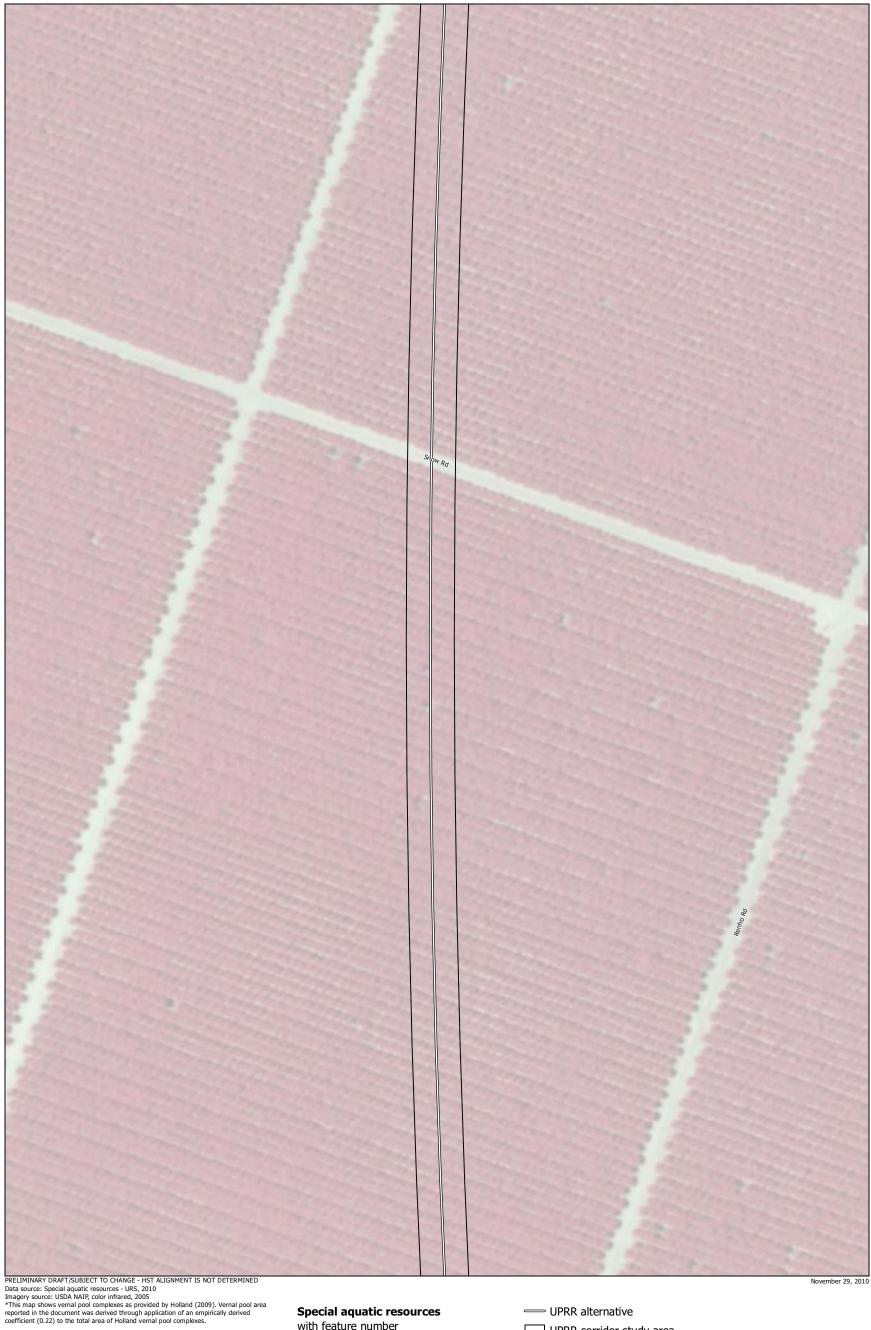
Seasonal wetland

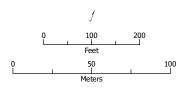
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 224 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

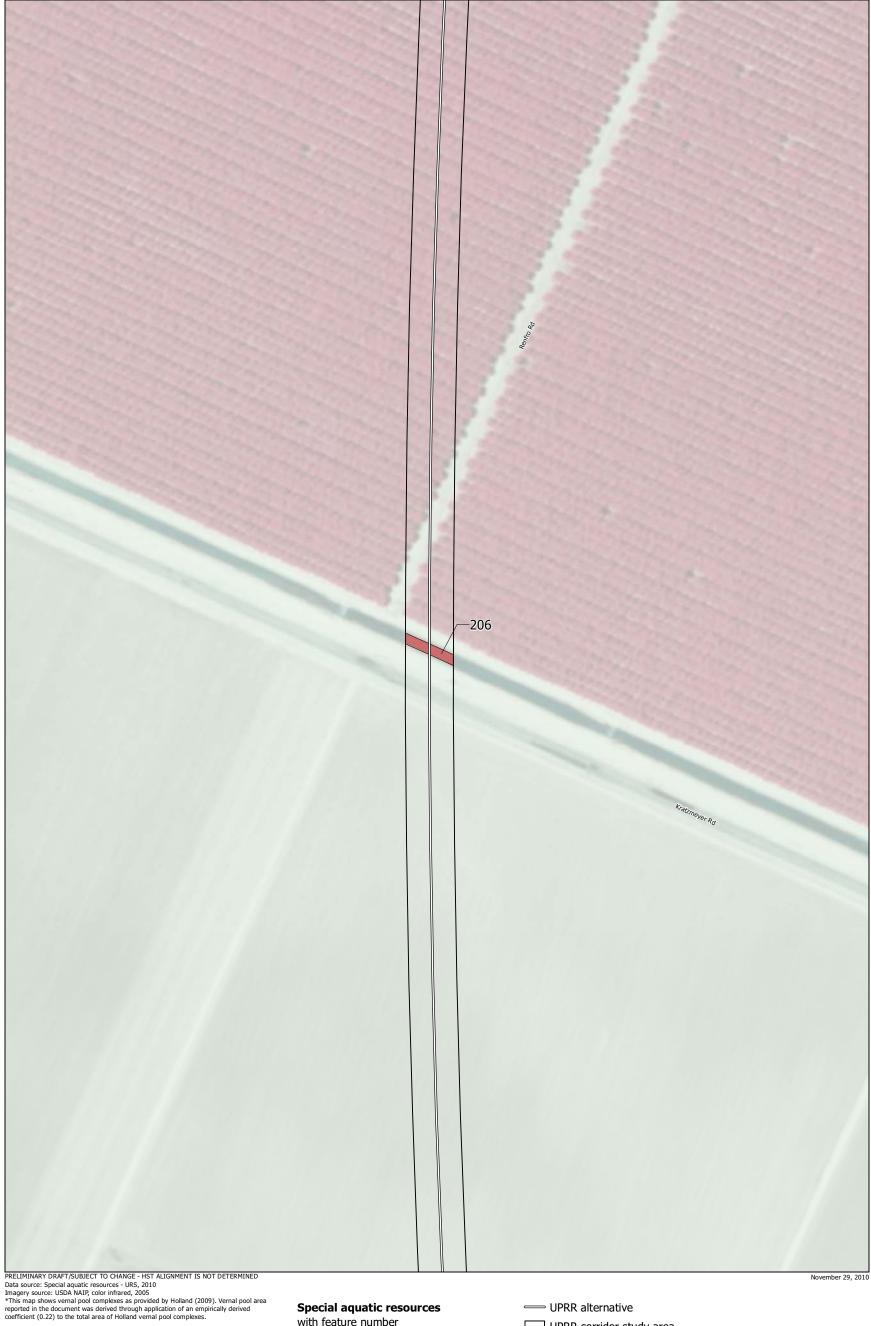
Riparian

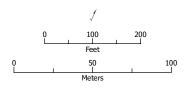
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 225 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Seasonal wetland

Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 226 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 227 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch Retention/Detention basin

Seasonal wetland

Riparian

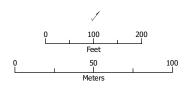
Riverine

Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 228 Estimated special aquatic resources located within the UPRR alternative alignment area





Vernal pool complex (Holland, 2009)\*

with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

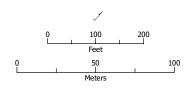
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 229 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 230 Estimated special aquatic resources located within the UPRR alternative alignment area



Canal/Ditch Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 231 Estimated special aquatic resources located within the UPRR alternative alignment area



Seasonal wetland

Vernal pool complex (Holland, 2009)\*

Sheet 232
Estimated special aquatic resources located within the UPRR alternative alignment area





0 100 200 Feet 0 50 100 Riparian

Riverine

Seasonal wetland

Vernal pool complex (Holland, 2009)\*

Appendix E-1b

Estimated special aquatic resources located within the UPRR alternative alignment area

Sheet 234





Retention/Detention basin Riparian Riverine Seasonal wetland Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 236 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch

Retention/Detention basin

Riparian

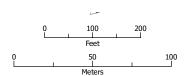
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 237 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

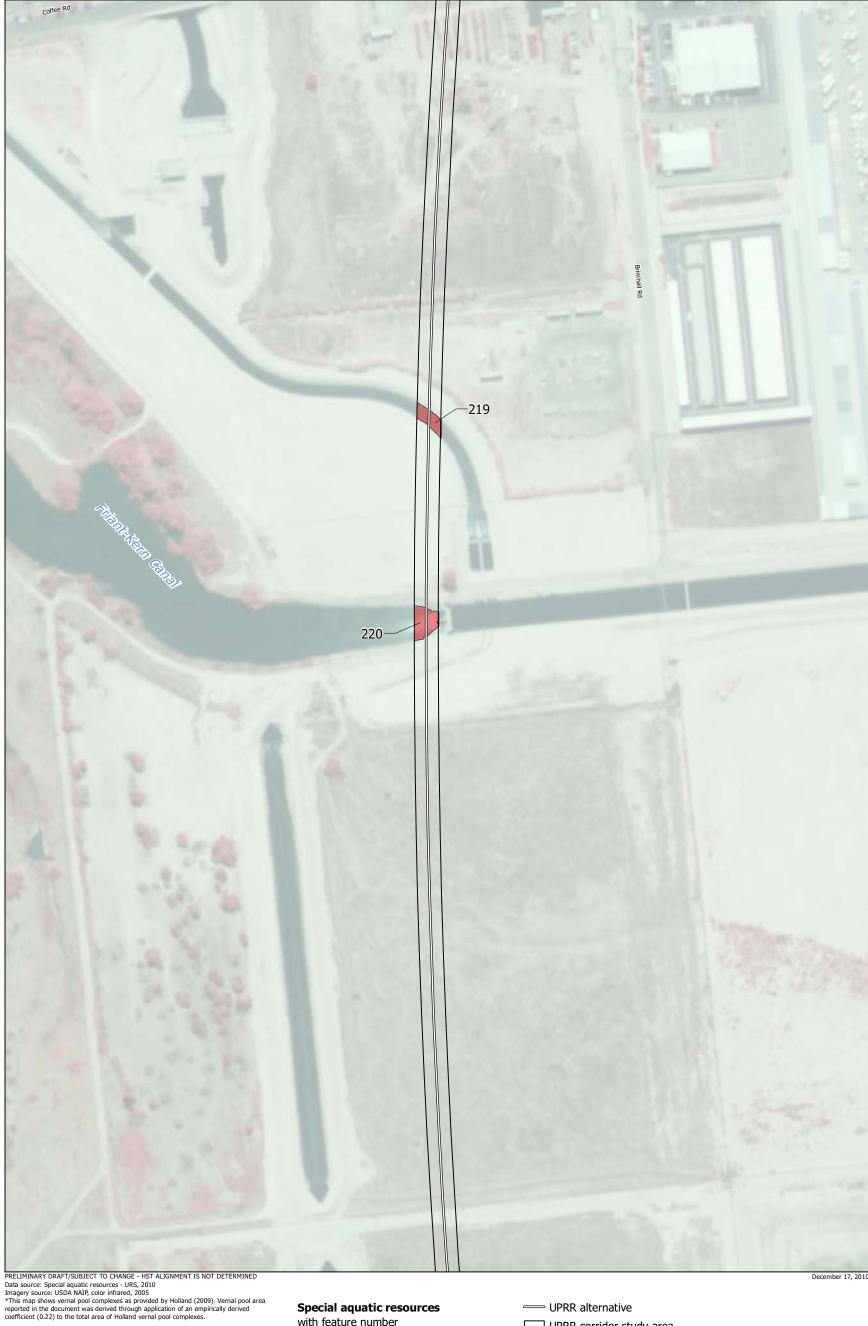
Riverine Seasonal wetland

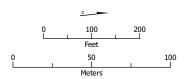
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 238 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

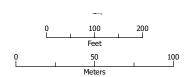
— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 239 Estimated special aquatic resources located within the UPRR alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Data source: Special aquatic resources - URS, 2010 Imagery source: USDA NAIP, color infrared, 2005 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources** 

with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 240 Estimated special aquatic resources located within the UPRR alternative alignment area



Vernal pool complex (Holland, 2009)\*

with feature number

Canal/Ditch

Retention/Detention basin

Riparian Riverine

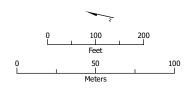
Seasonal wetland

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 241 Estimated special aquatic resources located within the UPRR alternative alignment area





**Special aquatic resources** with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 242 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number Canal/Ditch

Retention/Detention basin

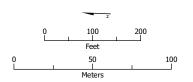
Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

UPRR corridor study area

Appendix E-1b Sheet 243 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 244 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

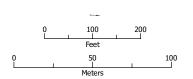
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 245 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

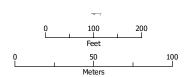
Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* UPRR corridor study area

Appendix E-1b Sheet 246 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

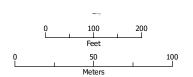
Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 247 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 248 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

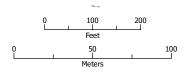
Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 249 Estimated special aquatic resources located within the UPRR alternative alignment area





with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

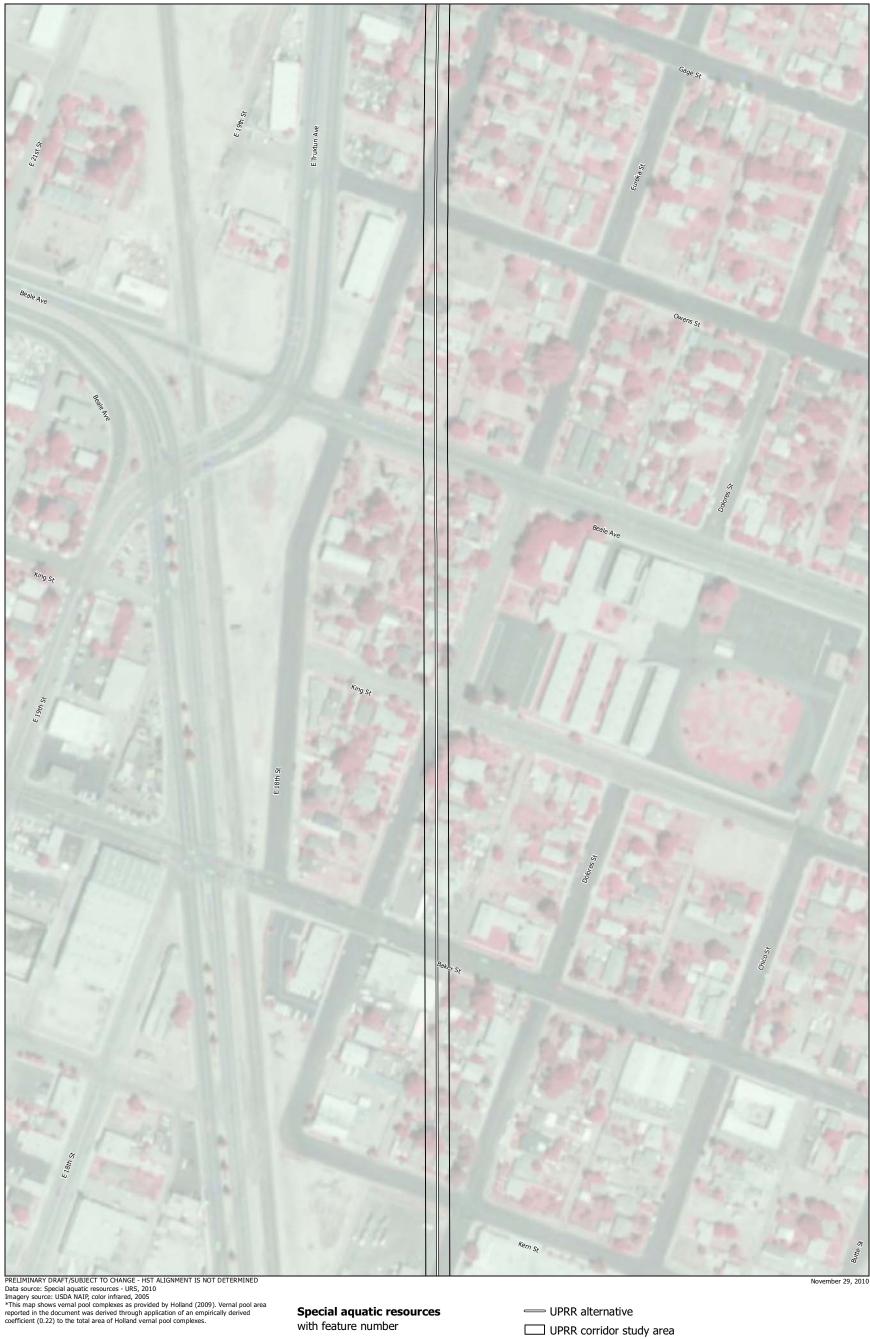
Riverine

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 250 Estimated special aquatic resources located within the UPRR alternative alignment area



Canal/Ditch

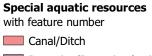
Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\*

Appendix E-1b Sheet 251 Estimated special aquatic resources located within the UPRR alternative alignment area





Retention/Detention basin

Riparian Riverine

Seasonal wetland Vernal pool complex (Holland, 2009)\* — UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 252 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 253 Estimated special aquatic resources located within the UPRR alternative alignment area



with feature number

Seasonal wetland

Canal/Ditch

Retention/Detention basin

Riparian

Riverine

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 254 Estimated special aquatic resources located within the UPRR alternative alignment area



Appendix E-1b

Estimated special aquatic resources located within the UPRR alternative alignment area

Sheet 255

0 100 200 Feet 0 50 100

Riverine

Seasonal wetland

Vernal pool complex (Holland, 2009)\*



with feature number

Canal/Ditch

Retention/Detention basin

Riparian

Riverine Seasonal wetland

Vernal pool complex (Holland, 2009)\*

— UPRR alternative

UPRR corridor study area

Appendix E-1b Sheet 256 Estimated special aquatic resources located within the UPRR alternative alignment area